UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region8

OCT 1 1 2016

Ref: 8ENF-UFO

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Permission to Resume Injection for the Ute Tribal 05-16 Well (EPA Permit ID # UT20736-04327, API # 43-013-31527) – Antelope Creek Oil Field, Duchesne County, Utah

Dear Mr. Farnsworth:

On October 3, 2016, the Environmental Protection Agency received information by mail from Nicole Colby on the above referenced well concerning the workover to address a loss of mechanical integrity and the follow-up mechanical integrity test (MIT) conducted on September 20, 2016. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. § 144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before September 20, 2021.

Pursuant to 40 C.F.R. § 144.52(a)(6), if the well is not used for a period of at least two (2) years (temporary abandonment), it shall be plugged and abandoned unless the EPA is notified and procedures are described to the EPA ensuring the well will not endanger underground sources of drinking water (non-endangerment demonstration) during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Any failure to comply with the UIC regulations found at 40 C.F.R. parts 144, 146, and 148 is subject to enforcement by the EPA, as provided in section 1423 of the Safe Drinking Water Act, 42 U.S.C. § 300h 2.

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Water Protection

TAB	GREEN	BLUE	CBI

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Gary Wang (8ENF-UFO)

Cc addresses:

Shaun Chapoose, Chairman
Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Edred Secakuku, Vice-Chairman
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Sincerely,

Darcy O'Connor
Acting Assistant Regional Administrator
Office of Water Protection

CONCURRENCES	Author + ext.	Print 1st initial + last name								
	Office code		8ENF-UFO							
	6128		10/4/16	10/7/16						

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
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Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
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SEP 07 2016

Ref: 8ENF-UFO

CERTIFIED MAIL
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Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

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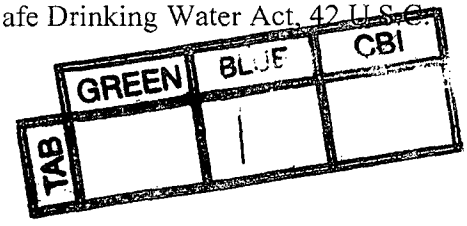

If you have any questions concerning this letter, you may contact Gary Wang at (303) 312-6469. Please direct all correspondence to the attention of Gary Wang at Mail Code 8ENF-UFO.

Sincerely,

Suzanne J. Bohan
Assistant Regional Administrator
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

bcc: Randy Brown (8P-TA)
Gary Wang (8ENF-UFO)

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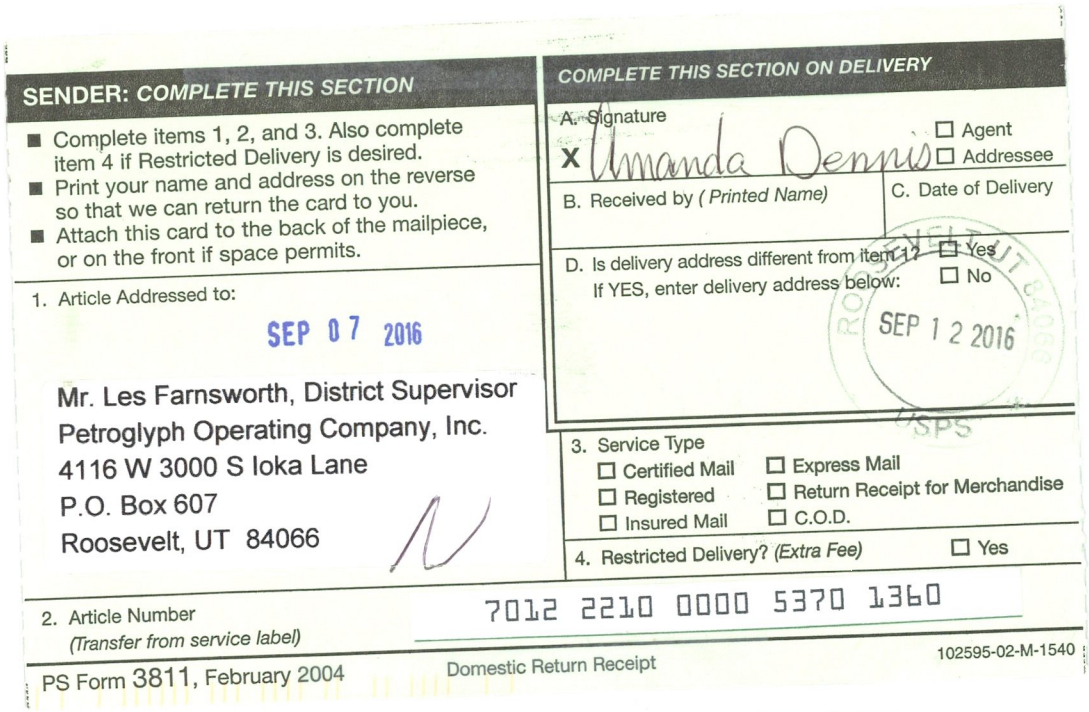

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

SEP 07 2016

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Amanda Dennis ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

ROOSEVELT UT 84066
SEP 12 2016
USPS

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☐ Certified Mail ☐ Express Mail
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☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7012 2210 0000 5370 1360

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

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Sent To Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
Street, A or PO B 4116 W 3000 S Ioka Lane
P.O. Box 607
City, Sta Roosevelt, UT 84066

7012 2210 0000 5370 1360

PS Form 3800, August 2006 See Reverse for Instructions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone 800-227-8917
www.epa.gov/region8

Ref: 8ENF-UFO

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RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, Utah 84066

Re: Underground Injection Control (UIC); Notice of Violation: Loss of Mechanical Integrity for the Ute Tribal 05-16 Well (EPA Permit ID# UT20736-04327, API # 43-013-31527) – Antelope Creek Oil Field, Duchesne County, Utah

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CONCURRENCES	Author + ext.	Print 1st initial + last name								
		Office code								

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Sincerely,

Suzanne J. Bohan
Assistant Regional Administrator
Office of Enforcement, Compliance
and Environmental Justice

cc: Shaun Chapoose, Chairman
Uintah & Ouray Business Committee

Edred Secakuku, Vice-Chairman
Uintah & Ouray Business Committee

Reannin Tapoof, Executive Assistant
Uintah & Ouray Business Committee

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CONCURRENCES	Author + ext.	Print 1st initial + last name								
	D Bolton	Office code	8ENF-UFO							
	6148		9/6/16							

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Sincerely,

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Assistant Regional Administrator
Office of Enforcement, Compliance
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Uintah & Ouray Business Committee
P.O. Box 70
Fort Duchesne, Utah 84026

Inspection Report For Well: UT20736 - 04327

U.S. Environmental Protection Agency
Underground Injection Control Program, 8ENF-T
999 18th Street, Suite 300, Denver, CO 80202-2466

This form was printed on 9/24/2013

INSPECTOR(S): Lead: Roberts, Sarah — Date: 10/10/2013 (12)
Others: Ajayi, Christopher — Time: 9:52 (am) / pm

OPERATOR (only if different): _____

REPRESENTATIVE(S): Chad Stevinson

PRE-INSPECTION REVIEW

Petroglyph Operating Company, Inc

Well Name:	Ute Tribal 05-16		
Well Type:	Enhanced Recovery (2R)		
Operating Status:	AC (ACTIVE) as of 12/31/2002		
Oil Field:	Antelope Creek (Duchesne)		
Location:	SESE S5 T5S R3W		
Indian Country:	X, Uintah and Ouray		
Last Inspection:	8/28/2012	***Allowable Inj Pressure:***	1950 /
Last MIT:	Pass 6/13/2013	***Annulus Pressure From Last MIT:***	1935

BLACK = POSSIBLE VIOLATION GREY = DATA MISSING

INSPECTION TYPE: (Select One)
- [ ] Construction / Workover
- [ ] Plugging
- [ ] Post-Closure
- [ ] Response to Complaint
- [x] Routine
- [ ] Witness MIT
- [ ] Other

ICIS Entered
Date 12/30/13
Initials JD

OBSERVED VALUES:

Tubing Gauge:	[x] Yes / [ ] No	Pressure: U: 1857 / L: ____ psig	Gauge Range: Static psig	Gauge Owner:	[ ] EPA / [x] Operator
Annulus Gauge:	[x] Yes / [ ] No	Pressure: 0 psig	Gauge Range: 2000 psig	Gauge Owner:	[x] EPA / [ ] Operator
Bradenhead Gauge:	[ ] Yes / [ ] No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	[ ] EPA / [ ] Operator
Pump Gauge:	[ ] Yes / [ ] No	Pressure: ____ psig	Gauge Range: ____ psig	Gauge Owner:	[ ] EPA / [ ] Operator

Operating Status: (Select One)
- [x] Active
- [ ] Being Reworked
- [ ] Not Injecting
- [ ] Production
- [ ] Plugged and Abandoned
- [ ] Under Construction

Use Entered
Date 12/17/13
Initial JC

See page 2 for photos, comments, and site conditions.

GREEN	BLUE	CBI
	1	

Inspection Report For Well: UT20736 - 04327 (PAGE 2)

PHOTOGRAPHS: ☐ Yes ☑ No List of photos taken: _____

Comments and site conditions observed during inspection: _____

GPS: GPS File ID: _____

Signature of EPA Inspector(s): _____ _____

☐ Data Entry ☐ Compliance Staff ☐ Hard Copy Filing

NOTICE OF INSPECTION

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII, 999 18TH STREET - SUITE 500
DENVER, COLORADO 80202-2405

Date: 12/16/13
Hour: 8:00a

Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300f et seq.).

Firm Name: Petroglyph Operating, Inc.

Firm Address: Roosevelt, UT, Antelope Creek Oil Field

REASON FOR INSPECTION:

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable condition of permit or rule authorization.

SECTION 1445(b) of the SAFE DRINKING WATER ACT is quoted below:

Section 1445(b)(1): Except as provided in Paragraph (2), the Administrator, or representatives of the Administrator duly designated by him, upon presenting appropriate credentials, and a written notice to any supplier of water or other person subject to (a), or person subject (A) a national primary drinking water regulation prescribed under Section 1412(B) an applicable Underground Injection Control Program, or (C) any requirement to monitor an unregulated contaminant pursuant to subsection (a), or person in charge of any of the property of such supplier or other person referred to in clause (A), (B), or (C), is authorized to enter any establishment, ... facility, or other property of such supplier or other person in order to determine whether such supplier or other person has acted or is acting in compliance with this title, including for this purpose, inspection, at reasonable times, of records, files, papers, processes, controls, and facilities, or in order to test any feature of a public water system, including its raw water source. The Administrator or the Comptroller General (or any representative designated by either) shall have access for the purpose of audit and examination to any records, reports, or information of a grantee which are required to be maintained under subsection (a) or which are pertinent to any financial assistance under this title.

Sarah Roberts
Inspector's Name & Title (Print)

Inspector's Signature

EPA R8 3560-1 (8-89)

Original - Regional Office Copy
Yellow Copy - Operator Copy

bcc: Sarah Roberts, 8ENF-UFO

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8ENF-UFO

JUN 0 5 2013

CERTIFIED MAIL 7009-3410-0000-2599-7846
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-16 Well
EPA Well ID# UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On May 29, 2013, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on May 28, 2013. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. §144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

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If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

	GREEN	BLUE	CBI
8		1	

If you have any questions concerning this letter, you may contact Sarah Roberts at (303) 312-7056. Please direct all correspondence to the attention of Sarah Roberts at Mail Code 8ENF-UFO.

Sincerely,

for

Darcy O'Connor, Director
UIC/FIFRA/OPA Technical Enforcement Programs

cc:

Irene Cuch, Jr., Chairwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Ronald Wopsock, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 190
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Reannin Tapoof, Assistant
Uintah & Ouray Business Committee
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Stewart Pike, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
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Richard Jenks, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
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Frances Poowegup, Councilwoman
Uintah & Ouray Business Committee
P.O. Box 190
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Phillip Chimburas, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Manuel Myore, Director of Energy,
Minerals and Air Programs
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

Mike Natchees, Environmental
Coordinator
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

John Rogers
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

hp LaserJet 4345mfp series

Fax Call Report

1

U.S. EPA (6211MR)
303-312-6953
2013-Jun-05 12:31 PM

Job	Date/Time	Type	Identification	Duration	Pages	Result
1678	2013-Jun-05 12:29 PM	Send	9,14357229145	1:36	4	Success

Fax

6/5/2013

From: D Aldinger, Region 8 Secretary
Phone: 1-303-312-6911
Company Name: US EPA Region 8

To: Mr. Les Farnsworth, District Supervisor
Company Name: *Petroglyph Operating Company, Inc.*
Fax: 1-435-722-9145

Comments:

Attached is a copy of letter mailed June 5, 2013 & regarding the following:

Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-16 Well
EPA Well ID # UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

☐ Urgent ☐ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.

COMPLETE THIS SECTION ON DELIVERY

A. Signature
x Julie Ray ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 West 3000 South Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

JUN 10 2013 UT 84066

nt from item 1? ☐ Yes
dress below: ☑ No

JUN - 6 2013

☑ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number *(Transfer from service lal* 7009 3410 0000 2599 7846

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7009 3410 0000 2599 7846

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JUN 05 2013

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Mr. Les Farnsworth, District Supervisor
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1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

JUN 0 5 2013

Ref: 8ENF-UFO CONCURRENCE COPY

CERTIFIED MAIL 7009-3410-0000-2599-7846
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-16 Well
EPA Well ID# UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On May 29, 2013, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on May 28, 2013. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. §144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. §144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

8ENF-UFO 6/4/13

SCHUMOFO 8ENF UFO 6/5/13

8ENF 6/5/13

If you have any questions concerning this letter, you may contact Sarah Roberts at (303) 312-7056. Please direct all correspondence to the attention of Sarah Roberts at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor, Director
UIC/FIFRA/OPA Technical Enforcement Programs

cc: Irene Cuch, Jr., Chairwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Ronald Wopsock, Vice-Chairman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Reannin Tapoof, Assistant
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Stewart Pike, Councilman
Uintah & Ouray Business Committee
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Fort Duchesne, Utah 84026

Richard Jenks, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Frances Poowegup, Councilwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Phillip Chimburas, Councilman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Manuel Myore, Director of Energy,
Minerals and Air Programs
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

Mike Natchees, Environmental
Coordinator
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

John Rogers
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

bcc: Randy Brown (8P-TA)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

JUL 03 2013

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2599-7884
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 05-16 Well
EPA Well ID # UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On June 19, 2013, the Environmental Protection Agency (EPA) received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the followup mechanical integrity test (MIT) conducted on June 13, 2013. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. §144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before June 13, 2018.

Pursuant to 40 C.F.R. §144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless EPA is notified and procedures are described to EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

TAB	GREEN	BLUE	CBI
		1	

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

JUL - 3 2013

Mr. Les Farnsworth, Dist. Supervi
Petroglyph Operation Co., Inc.
4116 W 3100 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Rodrigo Jurado ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Rodrigo Jurado C. Date of Delivery

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

JUL - 8 2013

3. Service Type
☐ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Number
(Transfer from service label) 7009 3410 0000 2599 7884

PS Form 3811, February 2004 Domestic Return Receipt 102595-02-M-1540

7009 3410 0000 2599 7884

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
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OFFICIAL USE

Postage	$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	

Postmark Here

T Mr. Les Farnsworth, Dist. Supervi
Se Petroglyph Operation Co., Inc.
Str 4116 W 3100 S Ioka Lane
or P.O. Box 607
Cit Roosevelt, UT 84066

PS Form 3800, August 2006 See Reverse for Instructions

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8ENF-UFO CONCURRENCE COPY

CERTIFIED MAIL 7009-3410-0000-2599-7884
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 05-16 Well
EPA Well ID # UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On June 19, 2013, the Environmental Protection Agency (EPA) received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the followup mechanical integrity test (MIT) conducted on June 13, 2013. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. §144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before June 13, 2018.

Pursuant to 40 C.F.R. §144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless EPA is notified and procedures are described to EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

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8ENF-UFO
6/26/13

JSCHULLER
8ENF-UFO
7/2/13

8ENF-UFO
7/1/13

If you have any questions concerning this letter, you may contact Sarah Roberts at (303) 312-7056. Please direct all correspondence to the attention of Sarah Roberts at Mail Code 8ENF-UFO.

Sincerely,

Darcy O'Connor, Director
UIC/FIFRA/OPA Technical Enforcement Programs

cc: Irene Cuch, Jr., Chairwoman
Uintah & Ouray Business Committee
P.O. Box 190
Fort Duchesne, Utah 84026

Ronald Wopsock, Vice-Chairman
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P.O. Box 190
Fort Duchesne, Utah 84026

Mike Natchees, Environmental
Coordinator
Ute Indian Tribe
P.O. Box 190
Fort Duchesne, Utah 84026

John Rogers
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114

bcc: Randy Brown (8P-TA)

OMB No. 2040-0042 Approval Expires 11/30/2014

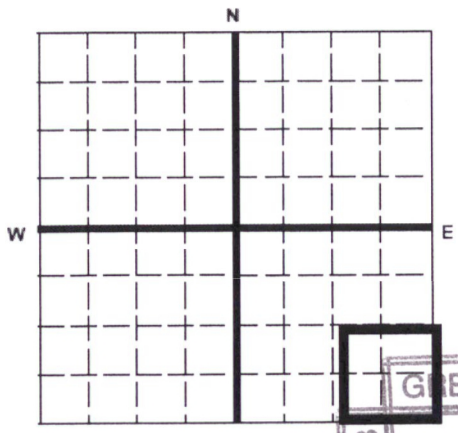
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04327

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 708 ft. frm (N/S) S Line of quarter section
and 523 ft. from (E/W) E Line of quarter section.

U2 Entered Date 3/29/17 Initial

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells 11

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-16

GREEN BLUE CBL TAB 2

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	16	1862	1874	442		0	0
February	16	1903	1913	768		0	0
March	16	1888	1894	328		0	0
April	16	1828	1906	231		0	0
May	16	1896	1902	426		0	0
June	16	1880	1914	455		0	0
July	16	1857	1891	333		0	0
August	16	1551	1791	80		0	1800
September	16	724	1413	0		0	2000
October	16	902	908	0		0	0
November	16	1709	1863	1183		0	0
December	16	1884	1918	892		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		03/21/2017

EPA Form 7520-11 (Rev. 12-11)

Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
EPA Annual Injection Report for Reporting Period 2016

Well Name: Ute Tribal 05-16

UIC Permit Number: UT2736-04434

API Number: 43-013-31527

Cause of Pressure and Mitigation Measures:

This well lost mechanical integrity on August 7, 2016, and a rig was placed on the well from September 13th to September 16th, 2016. A successful Mechanical Integrity Test was submitted on September 20, 2016. Upon approval, injecting began November 1, 2016.

Please see copy of attached notice and successful MIT test submitted to EPA on September 20, 2016.

PETROGLYPH

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 05-16 INJ, DUCHESNE**	Lab Tech:	**Kaitlyn Natelli**
Sample Point:	**Well Head**		
Sample Date:	**1/3/2017**		
Sample ID:	**WA-344971**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/9/2017
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0027
pH:	8.02
Calculated TDS (mg/L):	7881.01
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	99.00
H_2S in Gas (%):	
H2S in Water (mg/L):	10.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2654.76	Chloride (Cl):	3000.00
Potassium (K):	19.97	Sulfate (SO_4):	40.00
Magnesium (Mg):	15.30	Bicarbonate (HCO_3):	2074.00
Calcium (Ca):	26.19	Carbonate (CO_3):	
Strontium (Sr):	3.01	Hydroxide(HO):	
Barium (Ba):	9.72	Acetic Acid (CH_3COO)	
Iron (Fe):	12.43	Propionic Acid (C_2H_5COO)	
Zinc (Zn):	7.57	Butanoic Acid (C_3H_7COO)	
Lead (Pb):	0.00	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Ammonia NH_3:		Fluoride (F):	
Manganese (Mn):	0.09	Bromine (Br):	
Aluminum (Al):	0.00	Silica (SiO_2):	17.97
Lithium (Li):	3.30	Calcium Carbonate ($CaCO_3$):	
Boron (B):	3.57	Phosphates (PO_4):	4.05
Silicon (Si):	8.40	Oxygen (O_2):	

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	1.38	21.42	0.81	4.74	3.81	6.85	3.29	9.03	0.00	0.00	0.00	0.00	0.00	0.00	10.56	3.95
167.00	267.00	1.26	20.85	0.83	4.80	3.75	6.85	3.15	9.03	0.00	0.00	0.00	0.00	0.00	0.00	10.64	3.95
153.00	483.00	1.17	20.35	0.87	4.87	3.73	6.85	3.03	9.03	0.00	0.00	0.00	0.00	0.00	0.00	10.76	3.95
140.00	700.00	1.08	19.77	0.91	4.95	3.73	6.85	2.92	9.03	0.00	0.00	0.00	0.00	0.00	0.00	10.89	3.95
127.00	917.00	1.00	19.12	0.96	5.05	3.73	6.85	2.81	9.02	0.00	0.00	0.00	0.00	0.00	0.00	11.05	3.95
113.00	1133.00	0.93	18.41	1.03	5.15	3.76	6.85	2.69	9.01	0.00	0.00	0.00	0.00	0.00	0.00	11.22	3.95
100.00	1350.00	0.86	17.65	1.11	5.26	3.79	6.85	2.58	9.01	0.00	0.00	0.00	0.00	0.00	0.00	11.40	3.95
87.00	1567.00	0.79	16.86	1.20	5.36	3.85	6.85	2.47	9.00	0.00	0.00	0.00	0.00	0.00	0.00	11.61	3.95
73.00	1783.00	0.74	16.07	1.32	5.46	3.92	6.85	2.37	8.99	0.00	0.00	0.00	0.00	0.00	0.00	11.85	3.95
60.00	2000.00	0.69	15.30	1.44	5.54	4.01	6.86	2.26	8.98	0.00	0.00	0.00	0.00	0.00	0.00	12.10	3.95

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1553 East Highway 40
Vernal, UT 84078

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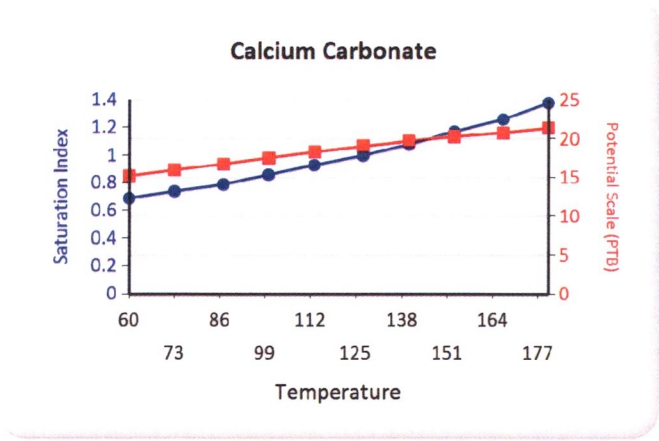
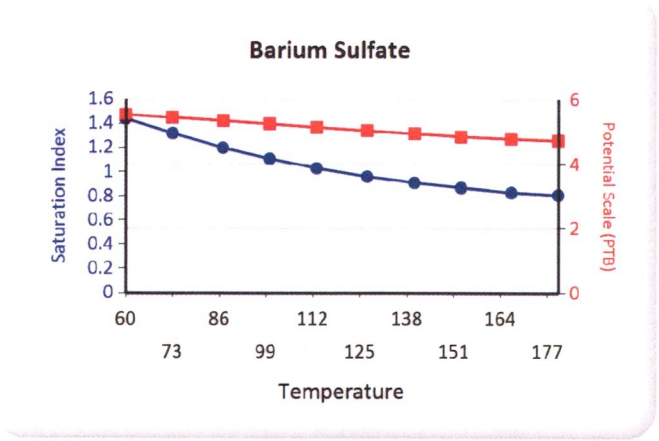
Water Analysis Report

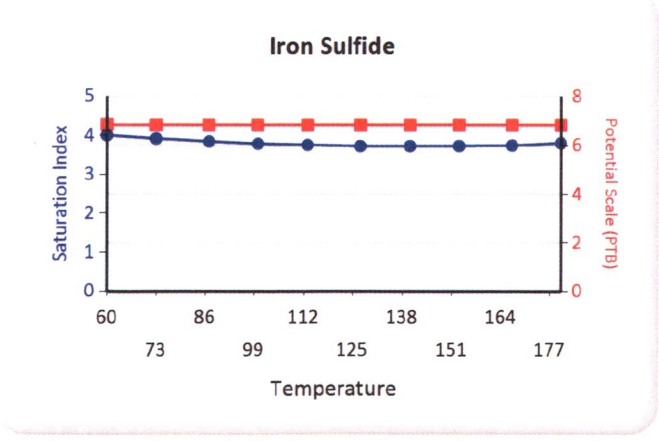
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	2.91	5.08	0.00	0.00	4.02	23.28	1.79	13.77	11.17	9.66
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	2.72	5.08	0.00	0.00	3.12	18.81	1.24	9.60	10.43	9.66
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	2.55	5.08	0.00	0.00	2.40	14.88	0.81	6.40	9.89	9.66
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	2.37	5.06	0.00	0.00	1.68	10.59	0.39	3.19	9.36	9.65
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	2.18	5.05	0.00	0.00	0.96	6.13	0.00	0.00	8.84	9.64
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	5.03	0.00	0.00	0.24	1.65	0.00	0.00	8.33	9.62
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	1.77	4.99	0.00	0.00	0.00	0.00	0.00	0.00	7.82	9.60
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	1.55	4.93	0.00	0.00	0.00	0.00	0.00	0.00	7.34	9.57
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	1.32	4.82	0.00	0.00	0.00	0.00	0.00	0.00	6.86	9.53
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	1.08	4.62	0.00	0.00	0.00	0.00	0.00	0.00	6.40	9.46

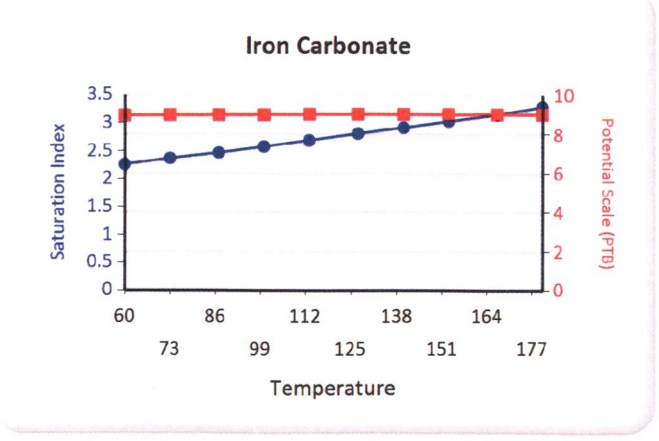
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Fe Silicate









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1553 East Highway 40
Vernal, UT 84078

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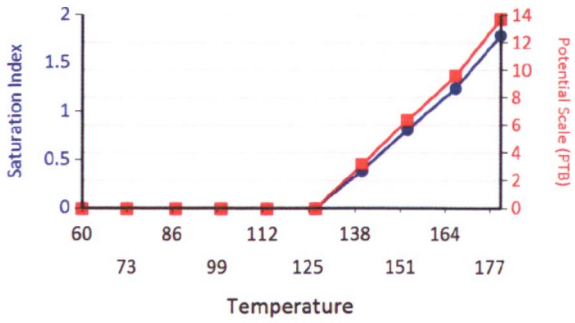
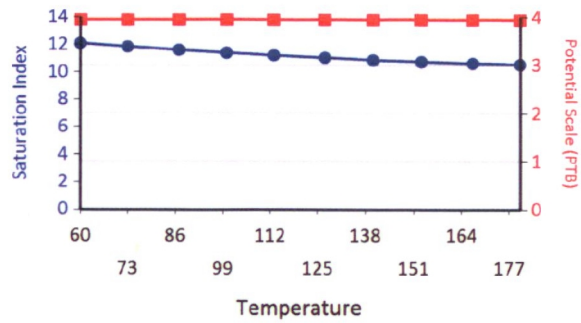
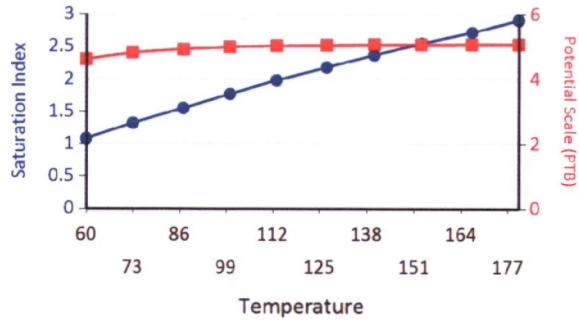
Ca Mg Silicate



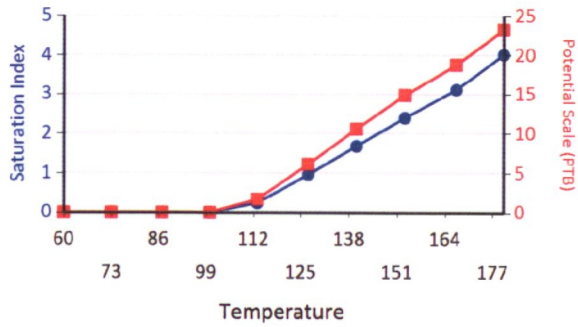
Zinc Sulfide



Zinc Carbonate



Mg Silicate



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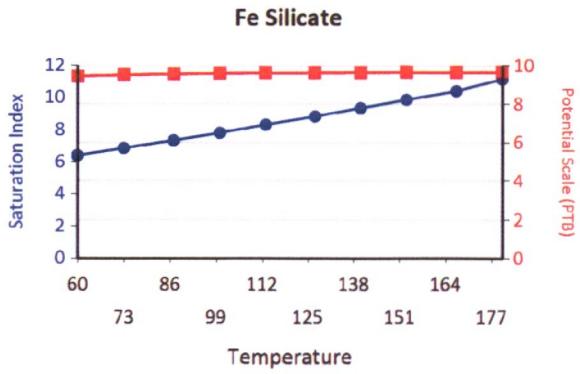


PETROGLYPH EXECUTIVE OFFICES

RECEIVED
AUG 29 2016
ECEJ

August 15, 2016

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Mr. Breffle:

Please be advised that on August 7, 2016, Petroglyph Operating lost Mechanical Integrity on the Ute Tribal 05-16 Injection Well. My direct number is (208) 685-9711 for more information, if needed.

Sincerely,
Petroglyph Operating Company, Inc.

Nicole Colby
Manager, Land & Regulatory Compliance

TAB	GREEN	BLUE	CBI
		2	

U2 Entered
Date 8/31/16
Initial JB

OMB No. 2040-0042 Approval Expires 11/30/2014

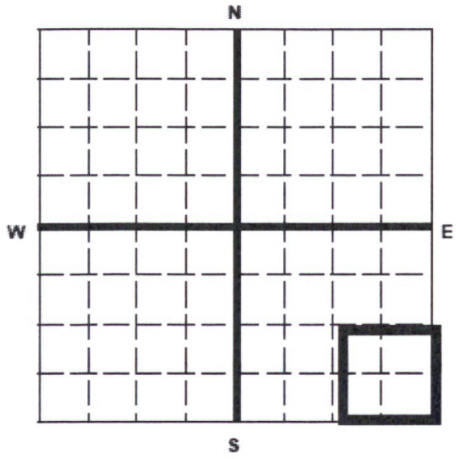
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah, 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04434 04327

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 708 ft. frm (N/S) S Line of quarter section
and 523 ft. from (E/W) E Line of quarter section.

U2 Entered
Date 2/29/16
Initial KB

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-16

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING – CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	15	1815	1915	558		0	0
February	15	1878	1899	637		0	0
March	15	1772	1908	691		0	0
April	15	1893	1896	677		0	0
May	15	1911	1915	716		0	0
June	15	1886	1923	627		0	0
July	15	1874	1891	670		0	0
August	15	1779	1914	617		0	0
September	15	1891	1913	511		0	0
October	15	1898	1901	514		0	0
November	15	1896	1896	476		0	0
December	15	1898	1915	437		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		02/08/2016

EPA Form 7520-11 (Rev. 12-11)

GREEN BLUE CB
TAB 2

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

multi-chem®
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Units of Measurement: **Standard**

Water Analysis Report

Production Company:	**PETROGLYPH OPERATING CO INC - EBUS**	Sales Rep:	**James Patry**
Well Name:	**UTE TRIBAL 05-16 INJ, DUCHESNE**	Lab Tech:	**Michele Pike**
Sample Point:	**Well Head**		
Sample Date:	**1/6/2016**		
Sample ID:	**WA-327650**		

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics

Test Date:	1/13/2016
System Temperature 1 (°F):	60
System Pressure 1 (psig):	2000
System Temperature 2 (°F):	180
System Pressure 2 (psig):	50
Calculated Density (g/ml):	1.0020
pH:	6.80
Calculated TDS (mg/L):	6740.80
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	60.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00
Tot. SuspendedSolids(mg/L):	
Corrosivity(LanglierSat.Indx)	0.00
Alkalinity:	

Analysis @ Properties in Sample Specifics

Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	2117.96	Chloride (Cl):	3000.00
Potassium (K):	1.89	Sulfate (SO_4):	520.00
Magnesium (Mg):	81.74	Bicarbonate (HCO_3):	793.00
Calcium (Ca):	181.53	Carbonate (CO_3):	
Strontium (Sr):	4.93	Acetic Acid (CH_3COO)	
Barium (Ba):	1.15	Propionic Acid (C_2H_5COO)	
Iron (Fe):	7.66	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	2.38	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.42	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.05	Silica (SiO_2):	28.09
Aluminum (Al):	0.13	Calcium Carbonate ($CaCO_3$):	
Lithium (Li):	1.86	Phosphates (PO_4):	3.42
Boron (B):	0.18	Oxygen (O_2):	
Silicon (Si):	13.13		

Notes:

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum CaSO4·2H2O		Celestite SrSO4		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.70	65.41	0.91	0.60	0.00	0.00	1.43	5.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
167.00	267.00	0.53	50.69	0.93	0.61	0.00	0.00	1.25	5.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	483.00	0.42	40.88	0.96	0.61	0.00	0.00	1.11	5.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	700.00	0.32	31.21	1.00	0.62	0.00	0.00	0.98	4.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
127.00	917.00	0.22	21.80	1.05	0.62	0.00	0.00	0.85	4.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	1133.00	0.13	12.78	1.11	0.63	0.00	0.00	0.72	4.43	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	1350.00	0.04	4.26	1.19	0.64	0.00	0.00	0.59	4.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	1.28	0.65	0.00	0.00	0.46	3.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	1.38	0.66	0.00	0.00	0.34	2.91	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	1.51	0.66	0.00	0.00	0.22	2.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Multi-Chem Analytical Laboratory
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Vernal, UT 84078

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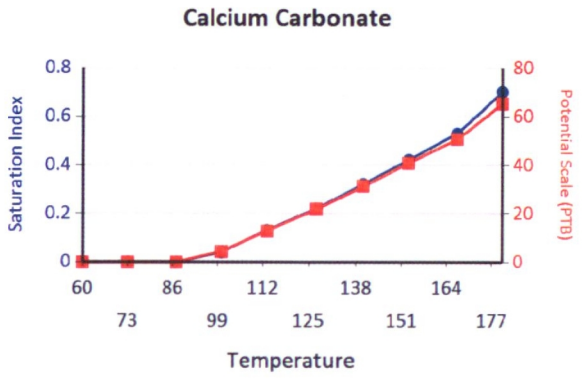
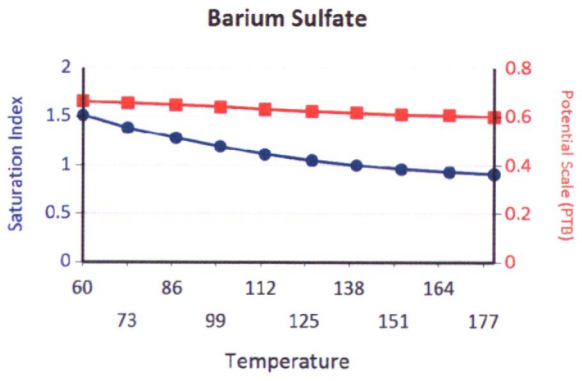
Water Analysis Report

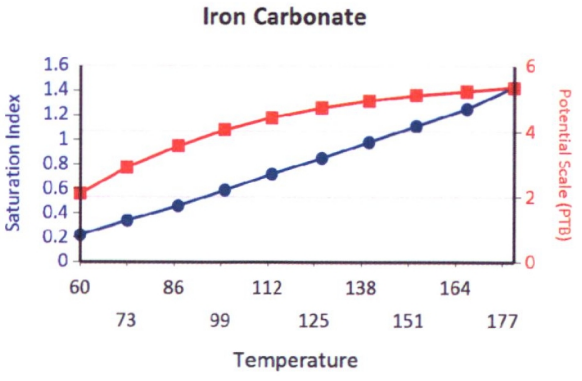
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
180.00	50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	1.41	0.00	0.00	0.00	0.00	0.00	0.00	3.95	5.60
167.00	267.00	0.00	0.00	0.00	0.00	0.00	0.00	0.68	1.27	0.00	0.00	0.00	0.00	0.00	0.00	2.94	5.19
153.00	483.00	0.00	0.00	0.00	0.00	0.00	0.00	0.49	1.08	0.00	0.00	0.00	0.00	0.00	0.00	2.28	4.70
140.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.29	0.78	0.00	0.00	0.00	0.00	0.00	0.00	1.63	3.95
127.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.28	0.00	0.00	0.00	0.00	0.00	0.00	1.00	2.84
113.00	1133.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	1.25
100.00	1350.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
87.00	1567.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	1783.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
60.00	2000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Barium Sulfate Iron Carbonate







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1553 East Highway 40
Vernal, UT 84078

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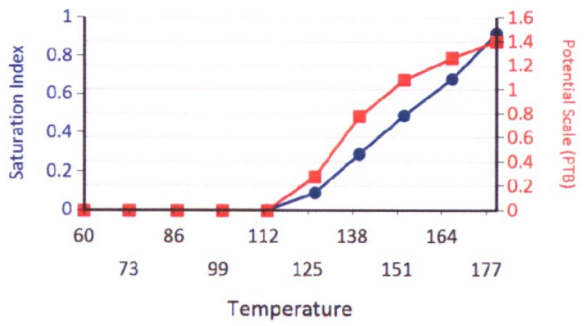
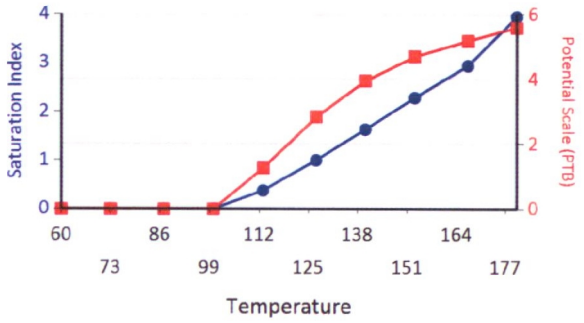
Water Analysis Report

Zinc Carbonate



Fe Silicate



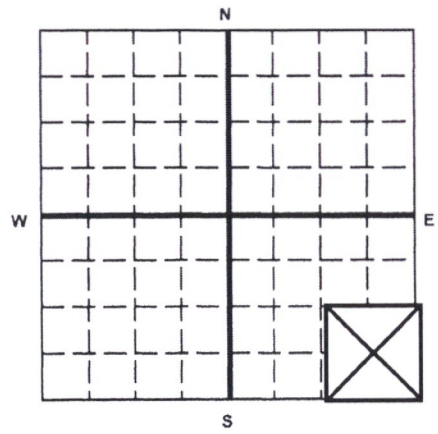
OMB No. 2040-0042 Approval Expires 12/31/2011

United States Environmental Protection Agency
Washington, DC 20460

EPA ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee	Name and Address of Surface Owner
Petroglyph Operating Company, Inc. 2258 P.O. Box 7608 Boise, Idaho 83709	Ute Indian Tribe P.O. Box 70 Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04327

Surface Location Description

___ 1/4 of ___ 1/4 of SE 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 708 ft. frm (N/S) S Line of quarter section and 523 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY	TYPE OF PERMIT
[ ] Brine Disposal	[ ] Individual
[X] Enhanced Recovery	[X] Area
[ ] Hydrocarbon Storage	Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-16

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	14	1847	1878	951		0	0
February	14	1872	1912	940		0	0
March	14	1870	1870	1130		0	0
April	14	1906	1911	1172		0	0
May	14	1879	1886	1243		0	0
June	14	1872	1896	849		0	0
July	14	1821	1828	652		0	0
August	14	1867	1874	721		0	0
September	14	1798	1833	568		0	0
October	14	1865	1890	760		0	0
November	14	1905	1910	831		0	0
December	14	1848	1918	807		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/10/2015

EPA Form 7520-11 (Rev. 12-08)

U2 Entered
Date 3/20/15
Initial GW

TAB	GREEN	BLUE	CBI
		2	

Multi-Chem Analytical Laboratory
1553 East Highway 40
Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH OPERATING CO INC - EBUS**
Well Name: **UTE TRIBAL 05-16 INJ, DUCHESNE**
Sample Point: **WELLHEAD**
Sample Date: **1/7/2015**
Sample ID: **WA-297470**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/14/2015
System Temperature 1 (°F):	160
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	80
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.0003
pH:	7.70
Calculated TDS (mg/L):	4481.69
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	16.00
H_2S in Gas (%):	
H2S in Water (mg/L):	5.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	1264.80	Chloride (Cl):	2000.00
Potassium (K):	19.72	Sulfate (SO_4):	257.00
Magnesium (Mg):	59.94	Bicarbonate (HCO_3):	732.00
Calcium (Ca):	111.55	Carbonate (CO_3):	
Strontium (Sr):	4.93	Acetic Acid (CH_3COO)	
Barium (Ba):	3.84	Propionic Acid (C_2H_5COO)	
Iron (Fe):	2.29	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	1.13	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.07	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.07	Silica (SiO_2):	24.35

Notes:
B=2.62 Al=.01 Li=.8

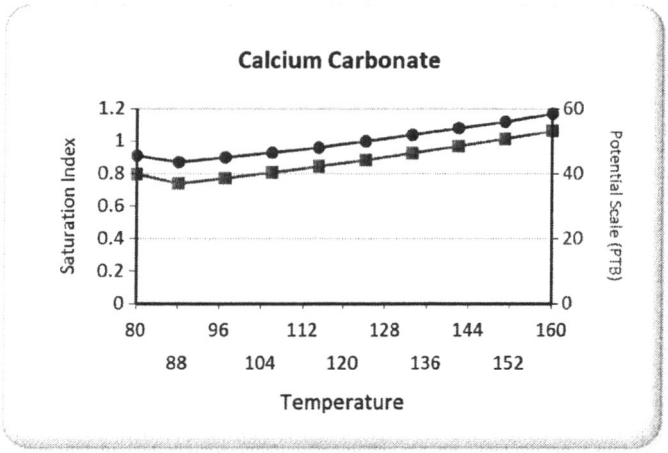
(PTB = Pounds per Thousand Barrels)

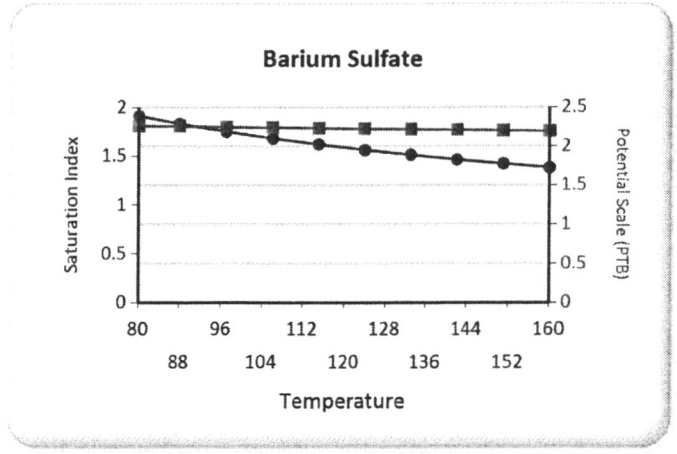
		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.91	39.83	1.91	2.26	2.57	1.26	1.04	1.50	0.00	0.00	0.00	0.00	0.00	0.00	10.49	0.59
88.00	157.00	0.87	36.96	1.83	2.25	2.44	1.25	1.03	1.50	0.00	0.00	0.00	0.00	0.00	0.00	10.26	0.59
97.00	300.00	0.90	38.58	1.75	2.25	2.40	1.25	1.09	1.52	0.00	0.00	0.00	0.00	0.00	0.00	10.11	0.59
106.00	443.00	0.93	40.33	1.68	2.24	2.36	1.25	1.15	1.54	0.00	0.00	0.00	0.00	0.00	0.00	9.98	0.59
115.00	585.00	0.96	42.21	1.62	2.23	2.34	1.25	1.21	1.56	0.00	0.00	0.00	0.00	0.00	0.00	9.85	0.59
124.00	728.00	1.00	44.21	1.56	2.22	2.32	1.25	1.27	1.57	0.00	0.00	0.00	0.00	0.00	0.00	9.74	0.59
133.00	871.00	1.04	46.31	1.51	2.22	2.32	1.25	1.33	1.58	0.00	0.00	0.00	0.00	0.00	0.00	9.63	0.59
142.00	1014.00	1.08	48.51	1.46	2.21	2.31	1.25	1.39	1.59	0.00	0.00	0.00	0.00	0.00	0.00	9.54	0.59
151.00	1157.00	1.12	50.78	1.42	2.20	2.32	1.25	1.45	1.60	0.00	0.00	0.00	0.00	0.00	0.00	9.45	0.59
160.00	1300.00	1.17	53.13	1.38	2.19	2.33	1.25	1.51	1.61	0.00	0.00	0.00	0.00	0.00	0.00	9.36	0.59

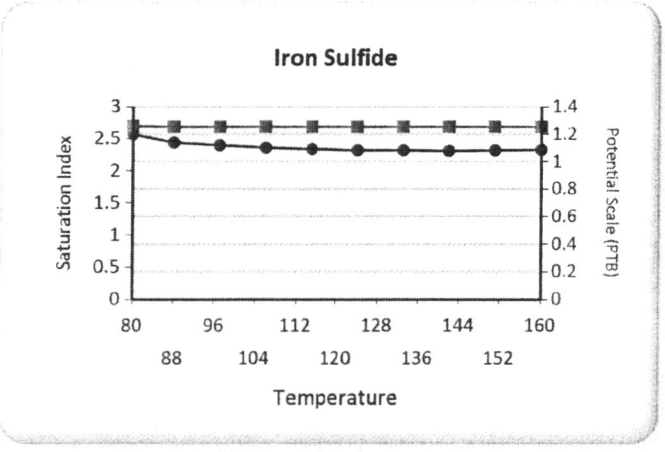
		Hemihydrate $CaSO_4 \sim 0.5H_2O$		Anhydrate $CaSO_4$		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
80.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.18	11.56	0.03	0.00	0.00	0.00	0.00	3.05	1.55
88.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.26	11.21	0.03	0.00	0.00	0.00	0.00	2.89	1.52
97.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.39	10.96	0.03	0.00	0.00	0.00	0.00	3.19	1.57
106.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.49	10.72	0.03	0.00	0.00	0.00	0.00	3.50	1.62
115.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.55	10.50	0.03	0.21	0.98	0.00	0.00	3.83	1.65
124.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.70	0.61	10.30	0.03	0.70	3.21	0.00	0.00	4.17	1.68
133.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	0.82	0.64	10.10	0.03	1.18	5.67	0.02	0.17	4.52	1.71
142.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.67	9.92	0.03	1.68	8.34	0.31	1.50	4.87	1.72
151.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.05	0.69	9.75	0.03	2.17	11.18	0.59	2.90	5.23	1.74
160.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.70	9.59	0.03	2.66	14.12	0.88	4.36	5.60	1.75

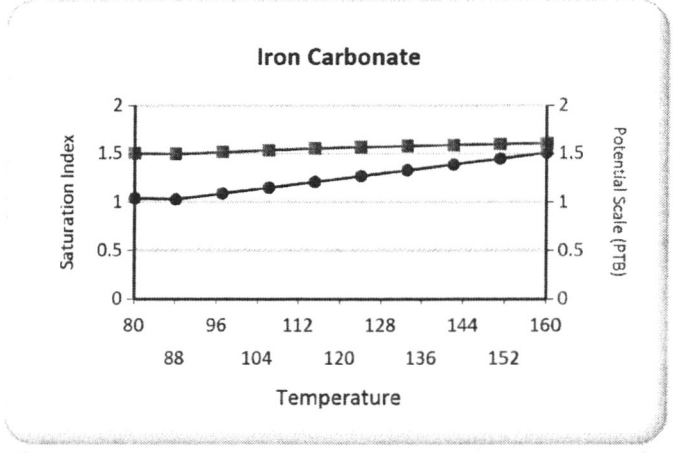
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Fe Silicate

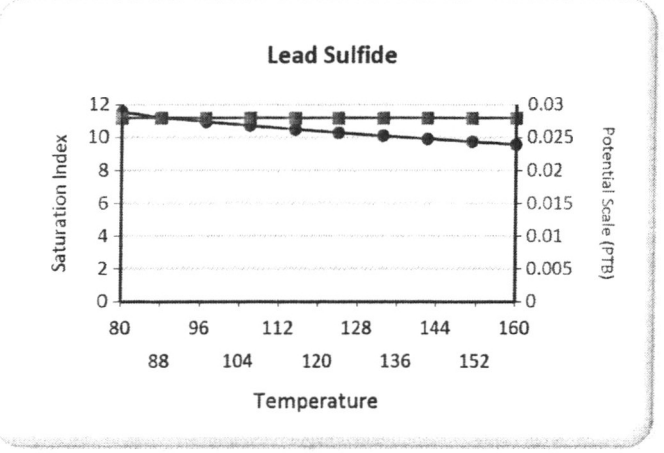
These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Sulfide Iron Carbonate Zinc Sulfide Zinc Carbonate Lead Sulfide Mg Silicate Ca Mg Silicate Fe Silicate

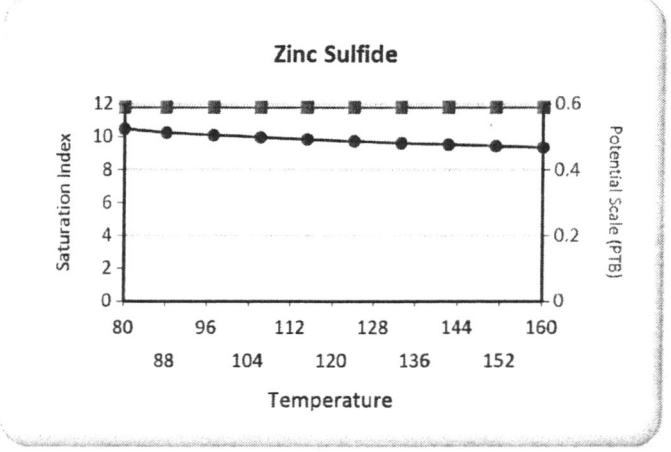




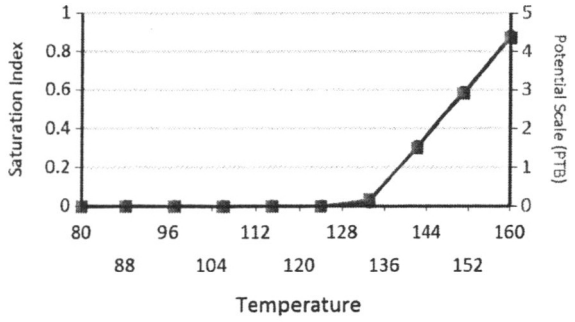




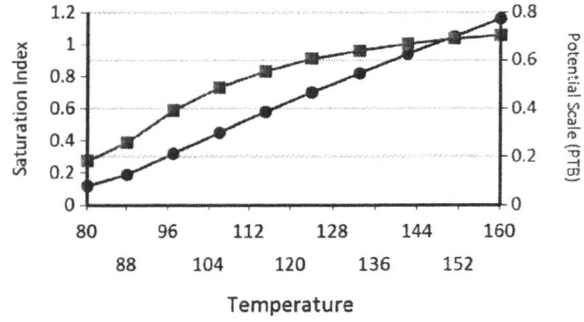




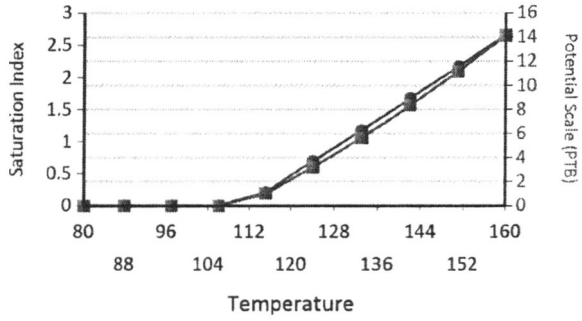
Ca Mg Silicate



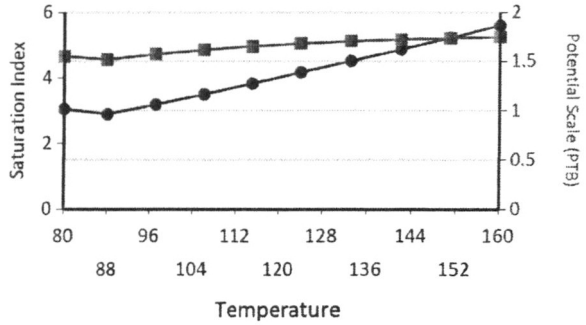
Zinc Carbonate



Mg Silicate



Fe Silicate



OMB No. 2040-0042 Approval Expires 12/31/2011

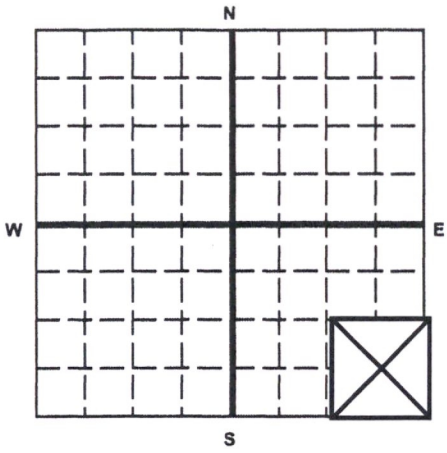
United States Environmental Protection Agency
Washington, DC 20460

ANNUAL DISPOSAL/INJECTION WELL MONITORING REPORT

Name and Address of Existing Permittee
Petroglyph Operating Company, Inc. 2258
P.O. Box 7608
Boise, Idaho 83709

Name and Address of Surface Owner
Ute Indian Tribe
P.O. Box 70
Ft. Duchesne, Utah 84026

Locate Well and Outline Unit on Section Plat - 640 Acres



State	County	Permit Number
Utah	Duchesne	UT2736-04327

Surface Location Description
___ 1/4 of ___ 1/4 of SE 1/4 of SE 1/4 of Section 5 Township 5S Range 3W

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location 708 ft. frm (N/S) S Line of quarter section
and 523 ft. from (E/W) E Line of quarter section.

WELL ACTIVITY
- [ ] Brine Disposal
- [X] Enhanced Recovery
- [ ] Hydrocarbon Storage

TYPE OF PERMIT
- [ ] Individual
- [X] Area

Number of Wells 111

Lease Name Ute Indian Tribe Well Number UTE TRIBAL 05-16

		INJECTION PRESSURE		TOTAL VOLUME INJECTED		TUBING -- CASING ANNULUS PRESSURE (OPTIONAL MONITORING)	
MONTH	YEAR	AVERAGE PSIG	MAXIMUM PSIG	BBL	MCF	MINIMUM PSIG	MAXIMUM PSIG
January	13	1772	1863	494		0	0
February	13	1874	1906	552		0	0
March	13	1742	1904	516		0	0
April	13	1738	1882	519		0	0
May	13	1348	1818	443		0	1840
June	13	531	766	0		0	1960
July	13	1565	1926	1256		0	0
August	13	1896	1917	1121		0	0
September	13	1880	1901	943		0	0
October	13	1891	1907	1033		0	0
November	13	1885	1894	957		0	0
December	13	1858	1869	924		0	0

Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title *(Please type or print)*	Signature	Date Signed
Chad Stevenson, Water Facilities Supervisor		2/11/2014

EPA Form 7520-11 (Rev. 12-08)

GREEN BLUE OBJ TAB 2

U2 Entered
Date 3/18/14
Initial

Multi-Chem Analytical Laboratory
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Vernal, UT 84078

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Units of Measurement: **Standard**

Water Analysis Report

Production Company: **PETROGLYPH ENERGY INC**
Well Name: **UTE TRIBAL 05-16 INJ**
Sample Point: **Wellhead**
Sample Date: **1/8/2014**
Sample ID: **WA-262963**

Sales Rep: **James Patry**
Lab Tech: **Gary Winegar**

Scaling potential predicted using ScaleSoftPitzer from Brine Chemistry Consortium (Rice University)

Sample Specifics	
Test Date:	1/15/2014
System Temperature 1 (°F):	180
System Pressure 1 (psig):	1300
System Temperature 2 (°F):	60
System Pressure 2 (psig):	15
Calculated Density (g/ml):	1.003
pH:	8.30
Calculated TDS (mg/L):	8866.69
CO2 in Gas (%):	
Dissolved CO_2 (mg/L)):	0.00
H_2S in Gas (%):	
H2S in Water (mg/L):	0.00

Analysis @ Properties in Sample Specifics			
Cations	*mg/L*	*Anions*	*mg/L*
Sodium (Na):	3030.97	Chloride (Cl):	4000.00
Potassium (K):	73.00	Sulfate (SO_4):	159.00
Magnesium (Mg):	31.00	Bicarbonate (HCO_3):	1464.00
Calcium (Ca):	70.00	Carbonate (CO_3):	
Strontium (Sr):	5.10	Acetic Acid (CH_3COO)	
Barium (Ba):	4.60	Propionic Acid (C_2H_5COO)	
Iron (Fe):	4.96	Butanoic Acid (C_3H_7COO)	
Zinc (Zn):	0.29	Isobutyric Acid ($(CH_3)_2CHCOO$)	
Lead (Pb):	0.00	Fluoride (F):	
Ammonia NH_3:		Bromine (Br):	
Manganese (Mn):	0.23	Silica (SiO_2):	23.54

Notes:
B=4.7 Al=.05 Li=1.1

(PTB = Pounds per Thousand Barrels)

		Calcium Carbonate		Barium Sulfate		Iron Sulfide		Iron Carbonate		Gypsum $CaSO_4 \cdot 2H_2O$		Celestite $SrSO_4$		Halite NaCl		Zinc Sulfide	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	1.44	47.05	1.76	2.69	0.00	0.00	2.07	3.57	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
73.00	157.00	1.45	46.58	1.62	2.67	0.00	0.00	2.13	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
86.00	300.00	1.47	47.63	1.49	2.65	0.00	0.00	2.21	3.58	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	443.00	1.50	48.76	1.38	2.62	0.00	0.00	2.28	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
113.00	585.00	1.54	49.94	1.28	2.59	0.00	0.00	2.35	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
126.00	728.00	1.57	51.15	1.20	2.56	0.00	0.00	2.42	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
140.00	871.00	1.62	52.33	1.12	2.53	0.00	0.00	2.49	3.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
153.00	1014.00	1.66	53.48	1.06	2.50	0.00	0.00	2.56	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
166.00	1157.00	1.71	54.57	1.01	2.47	0.00	0.00	2.63	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.00	1300.00	1.77	55.58	0.97	2.44	0.00	0.00	2.69	3.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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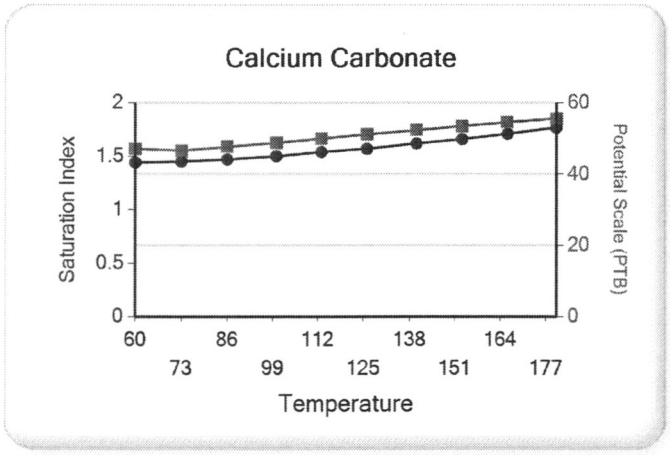
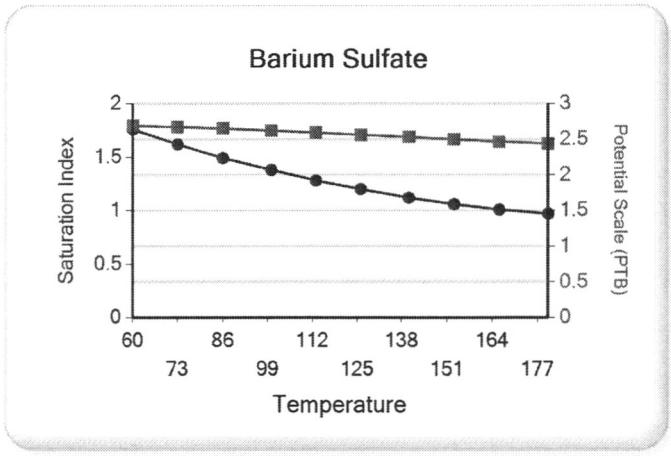
Water Analysis Report

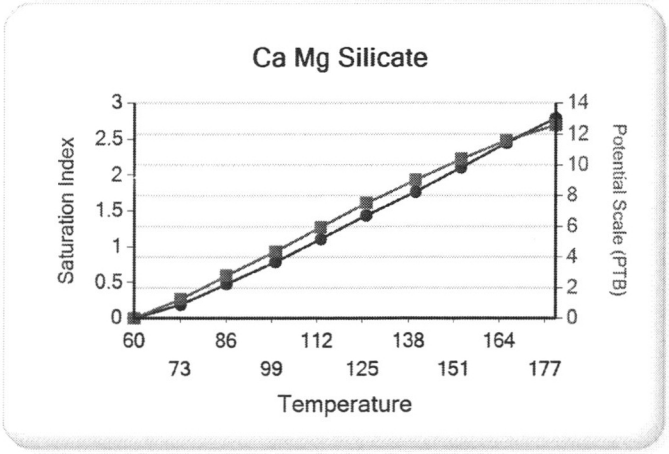
		Hemihydrate CaSO4~0.5H2O		Anhydrate CaSO4		Calcium Fluoride		Zinc Carbonate		Lead Sulfide		Mg Silicate		Ca Mg Silicate		Fe Silicate	
Temp (°F)	PSI	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB	SI	PTB
60.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.37	2.16	0.00	0.00	7.04	3.83
73.00	157.00	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.05	0.00	0.00	0.82	4.35	0.19	1.24	7.22	3.83
86.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.11	0.00	0.00	1.38	7.11	0.48	2.79	7.53	3.84
100.00	443.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.14	0.00	0.00	1.95	9.94	0.79	4.37	7.86	3.84
113.00	585.00	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.15	0.00	0.00	2.54	12.86	1.11	5.96	8.22	3.85
126.00	728.00	0.00	0.00	0.00	0.00	0.00	0.00	0.86	0.17	0.00	0.00	3.13	15.84	1.44	7.52	8.60	3.85
140.00	871.00	0.00	0.00	0.00	0.00	0.00	0.00	1.01	0.18	0.00	0.00	3.73	18.82	1.77	9.02	8.99	3.85
153.00	1014.00	0.00	0.00	0.00	0.00	0.00	0.00	1.16	0.18	0.00	0.00	4.33	21.64	2.11	10.39	9.40	3.85
166.00	1157.00	0.00	0.00	0.00	0.00	0.00	0.00	1.29	0.19	0.00	0.00	4.93	24.10	2.45	11.59	9.81	3.86
180.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	1.42	0.19	0.00	0.00	5.52	26.00	2.79	12.57	10.23	3.86

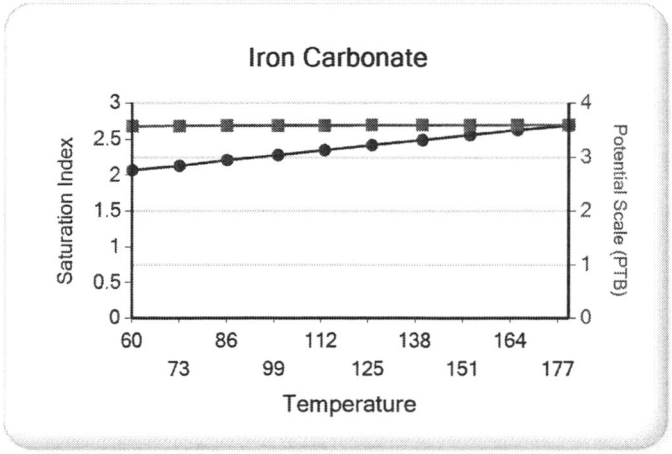
These scales have positive scaling potential under initial temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Mg Silicate Fe Silicate

These scales have positive scaling potential under final temperature and pressure: Calcium Carbonate Barium Sulfate Iron Carbonate Zinc Carbonate Mg Silicate Ca Mg Silicate Fe Silicate









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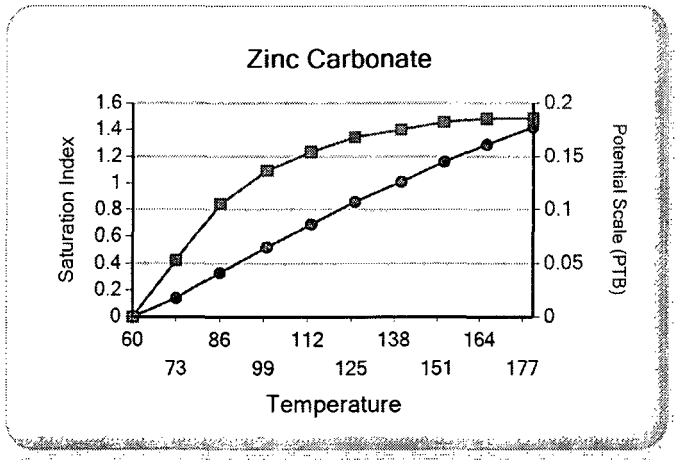
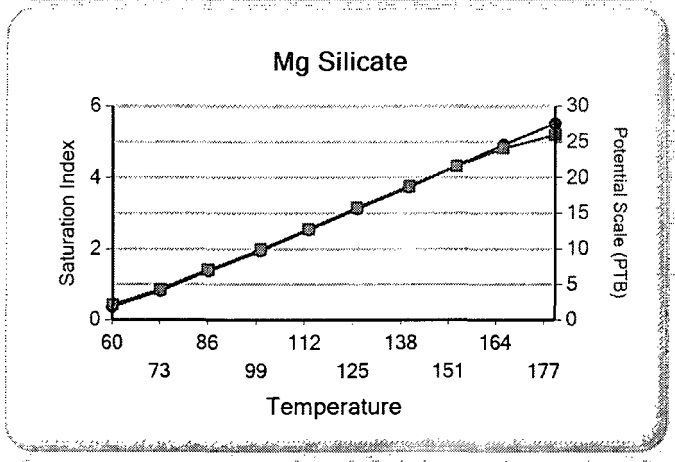
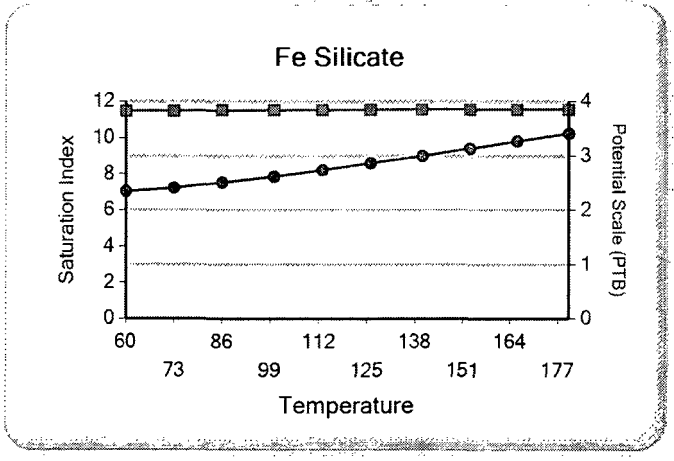
Water Analysis Report







Petroglyph Operating Company, Inc.
Annulus Pressure Cause and Mitigation Measures
2013 EPA Annual Injection Report

Well Name: Ute Tribal 05-16

UIC Permit Number: UT2736-04327

API Number: 43-013-31527

Cause of Pressure and Mitigation Measures:
This well lost Mechanical Integrity during the month of May. A rig moved on the well in May and repaired the well. The well passed an MIT in June. All annulus pressure reported is associated with the loss of mechanical integrity and the subsequent MIT.

PETROGLYPH

May 22, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that we have lost the Mechanical Integrity on the Ute Tribal 05-16 Injection Well. We immediately ceased injection on the date referenced. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8ENF-UFO

JUN 0 5 2013

CERTIFIED MAIL 7009-3410-0000-2599-7846
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Notice of Violation:
Loss of Mechanical Integrity
Ute Tribal 05-16 Well
EPA Well ID# UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

RECEIVED
JUN 1 0 2013
BY:----------

Dear Mr. Farnsworth:

On May 29, 2013, the Environmental Protection Agency (EPA) learned that the Petroglyph Operating Company, Inc. injection well referenced above lost mechanical integrity on May 28, 2013. Pursuant to the above-referenced UIC Permit and Title 40 of the Code of Federal Regulations Section 144.51(q)(1) (40 C.F.R. §144.51(q)(1)), you must establish and maintain mechanical integrity. A loss of mechanical integrity is a violation of this requirement.

Pursuant to the above-referenced UIC Permit and the regulations at 40 C.F.R. §144.51(q)(2), you must immediately cease injection into this well. Before injection may resume, you must demonstrate that the well has mechanical integrity by passing a mechanical integrity test (MIT). You must also receive written authorization from the EPA.

If you choose to plug and abandon this well, a plugging and abandonment plan must be submitted to EPA for approval prior to the plugging operation.

Failure to comply with the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitutes one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

May 28, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit # UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised, this is the action we plan to take to fix the loss of integrity on the 05-16 injector: we are going to release the packer and pull the tubing, inspecting the tubing as it comes out of the hole, make a bit and scraper run past the perforations, and circulate and clean the well. Tubing will be replaced as needed. We then plan to re-perforate some existing perforations, including C6: 4908-12, 4918-23, 4934-38 which was previously squeezed. Existing perforations will be acidized using a packer and plug for isolation and pumping 15% Hcl through a dedicated tubing string followed by a fresh water over flush.
We will swab the well back to a neutral PH before running in the hole with a new Arrowset 1 Packer, breaking and doping all connections on the way back in, pressure testing the tubing to 3500psi BHP, and performing and MIT on the casing to 1900psi. We will submit the results of the MIT for approval to re-inject. This work is expected to begin immediately. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

June 17, 2013

EPA
ATTN: Don Breffle
Region 8
1595 Wyncoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04327
Well ID: Ute Tribal 05-16
Ute Tribal No. 05-16, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test on the above referenced well. This test was performed to provide proof of integrity after we rigged up on the well to address a Mechanical Integrity issue. We initially pulled the packer, inspected the tubing on the way out and replaced 26 joints of pipe. We then ran a bit and scraper past the perforations, circulated the well, and determined the well would benefit from an acid treatment through the existing perforations. We acidized the following: Zone 1: 5374-5448: 750 gal 15% Hcl followed by a 23 Bbl. fresh water over-flush. Zone 2: 4816-4832: 500 gal 15% Hcl followed by a 23 Bbl. fresh water over-flush. We then ran in hole with a new Arrowset 1 Packer, breaking and doping all connections, pressure tested tubing to 3500# BHP and performed an MIT on the casing to 1900# with no loss. No perforations were re-shot as previously planned. Please advise as soon as possible so we may resume injection on this well. Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc.

Encl: MIT

Mechanical Integrity Test
Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency
Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW
999 18th Street, Suite 500 Denver, CO 80202-2466

EPA Witness: _____ Date: 6/10/13

Test conducted by: Boyd Cook

Others present: _____

Well Name: 05-16 Type: ER SWD Status: AC TA UC

Field: ANTELOPE CREEK

Location: 05 16 Sec: ___ T ___ N/S R ___ E/W County: DUCHESNE State: UT

Operator: PETROGLYPH ENERGY

Last MIT: / / Maximum Allowable Pressure: _____ PSIG

Is this a regularly scheduled test? [ ] Yes [ ] No

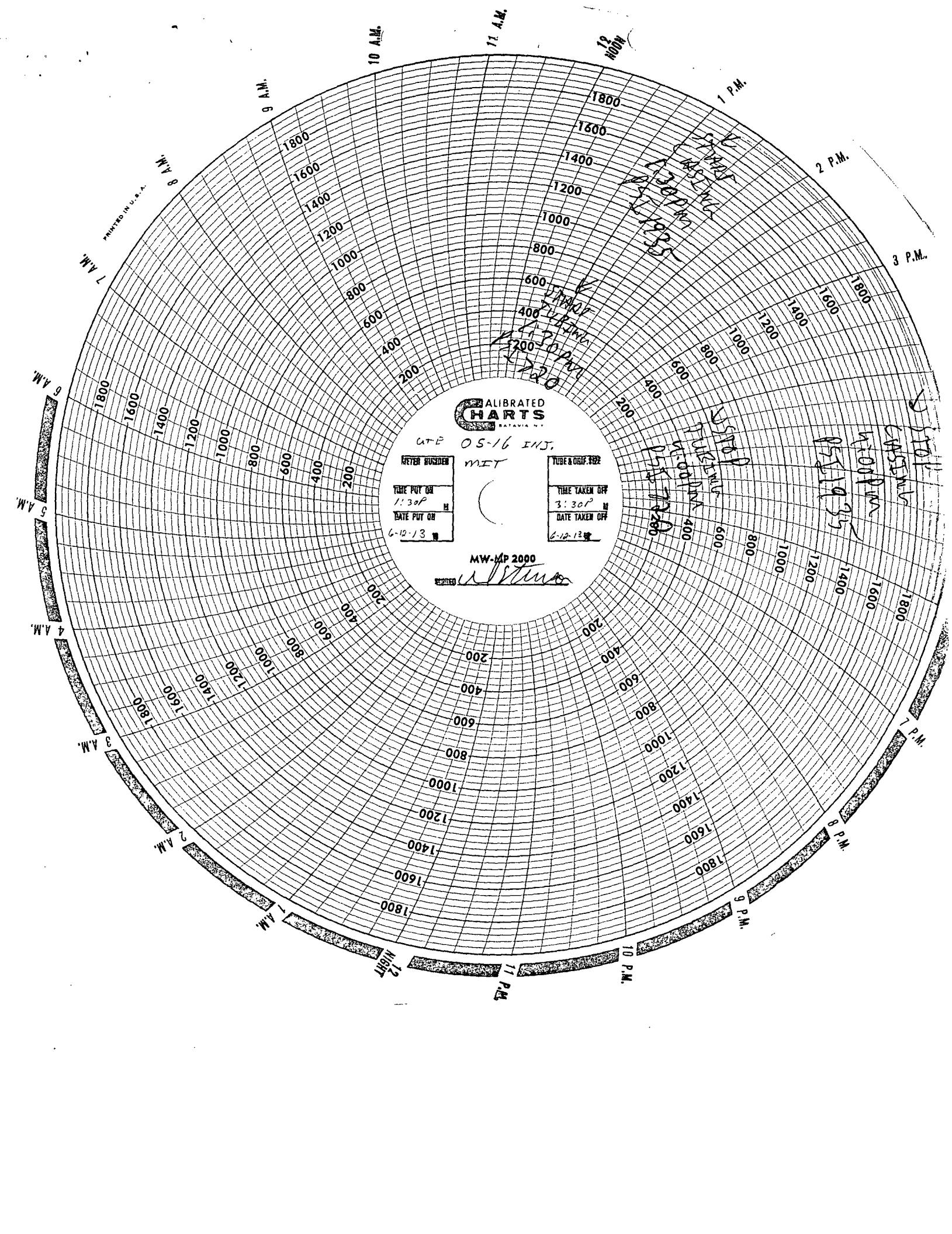
Initial test for permit? [ ] Yes [ ] No

Test after well rework? [X] Yes [ ] No

Well injecting during test? [ ] Yes [X] No If Yes, rate: _____ bpd

Pre-test casing/tubing annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	720 psig	psig	psig
End of test pressure	720 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	1935 psig	psig	psig
5 minutes	1935 psig	psig	psig
10 minutes	1935 psig	psig	psig
15 minutes	1935 psig	psig	psig
20 minutes	1935 psig	psig	psig
25 minutes	1935 psig	psig	psig
30 minutes	1935 psig	psig	psig
2 1/2 Hours minutes	1935 psig	psig	psig
minutes	psig	psig	psig


CALIBRATED CHARTS BATAVIA N.Y.
METER NUMBER
TIME PUT ON
1:30P M
DATE PUT ON
6-12-13
TUBE & ORIF. SIZE
TIME TAKEN OFF
3:30P M
DATE TAKEN OFF
6-12-13
MW-MP 2000
PRINTED IN U.S.A.
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1 P.M.
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8 A.M.
9 A.M.
10 A.M.
11 A.M.

Petroglyph Energy, Inc.
960 Broadway Ave., Ste. 500
BOISE, ID 83706
(208) 685-7600

WellWork AFE Chronological Regulatory Report

Well Name : UTE TRIBAL 05-16 INJ					
Prospect:	ANTELOPE CREEK			AFE #:	42834
Sec/Twp/Rge:	5 / 5S / 3W			Operator:	PETROGLYPH
API #:	43013315270000	Field:	ANTELOPE CREEK	Supervisor:	Leon & Alex
Work Type:	Downhole Failure	County , St.:	DUCHESNE, UT	Phone:	
Production Current/Expected	Oil: 0 / 0	Gas:	0 / 0	Water:	0 / 0

Wellwork Details

Date : 5/24/2013	Activity: Flowback	Rig Name:	Days : 1
Daily Report Summary :			
Daily Report Detail:	Remarks Level out dirt around wellhead, R/U & set pump & tanks R/U flowback to rig tank, starting tbg @ 1675# w/ choke @ 10/64, turned well over to waterflood to start flowback over weekend, SDFW Travel		

From 11:30 To 13:30	2 hrs	Category/Rmks:	MIRU : Level out dirt around wellhead, R/U & set pump & tanks
From 13:30 To 16:30	3 hrs	Category/Rmks:	Flowback : R/U flowback to rig tank, starting tbg @ 1675# w/ choke @ 10/64, turned well over to waterflood to start flowback over weekend, SDFW
From 16:30 To 17:30	1 hrs	Category/Rmks:	Travel : Travel

Date : 5/28/2013	Activity: Flowback	Rig Name:	Days : 5
Daily Report Summary :			
Daily Report Detail:	Remarks Travel Circulate well w/ rig pump & hot oiler w/ h2s levels from 100 - 300 PPM, multi-chem brought out chem to pump, cont circ well w/ h2s readings dwn to 0. N/D wellhead & N/U BOP, Further rig activity at holdstill due to access permit problems & PRS had access permit problems also, SDFD Travel		

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 14:00	7 hrs	Category/Rmks:	Circulate : Circulate well w/ rig pump & hot oiler w/ h2s levels from 100 - 300 PPM, multi-chem brought out chem to pump, cont circ well w/ h2s readings dwn to 0. N/D wellhead & N/U BOP, Further rig activity at holdstill due to access permit problems & PRS had access permit problems also, SDFD
From 14:00 To 15:00	1 hrs	Category/Rmks:	Travel : Travel

Date : 5/29/2013	Activity: Logging	Rig Name:	Days : 6
Daily Report Summary :			
Daily Report Detail:	Remarks Travel N/D wellhead & N/U weatherford BOP, SITP @ 20# & SICP @ 30#, R/U PRS to scan log tbg, POOH w/ tbg while scan logging w/ 58 jts = BLUE BAND, 67 jts = YELLOW BAND, 26 jts = RED BAND, L/D packer Wait for roustabouts to bring tbg & RIH w/ bit & scraper w/ EOT @ 4262.98', SWIFN Travel		

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 12:00	5 hrs	Category/Rmks:	Log : N/D wellhead & N/U weatherford BOP, SITP @ 20# & SICP @ 30#, R/U PRS to scan log tbg, POOH w/ tbg while scan logging w/ 58 jts = BLUE BAND, 67 jts = YELLOW BAND, 26 jts = RED BAND, L/D packer
From 12:00 To 17:00	5 hrs	Category/Rmks:	RIH : Wait for roustabouts to bring tbg & RIH w/ bit & scraper w/ EOT @ 4262.98', SWIFN
From 17:00 To 18:00	1 hrs	Category/Rmks:	Travel : Travel

Well Name : UTE TRIBAL 05-16 INJ							
Prospect:	ANTELOPE CREEK				AFE #:	42834	
Sec/Twp/Rge:	5 / 5S / 3W				Operator:	PETROGLYPH	
API #:	43013315270000	Field:	ANTELOPE CREEK		Supervisor:	Leon & Alex	
Work Type:	Downhole Failure	County , St.:	DUCHESNE, UT		Phone:		
Production Current/Expected	Oil:	0 / 0	Gas:	0 / 0	Water:	0 / 0	

Date :	5/30/2013	Activity:	Run Bit & Scrapper	Rig Name:		Days :	7

Daily Report Summary :

Daily Report Detail:

Remarks
Travel
P/U bit & scraper, RIH w/ tbg & tag @ 6056', L/D 16 jts & circ hole w/ rig pump w/ 5 BPM @ 900#
Circ well for 3.5 hrs & drop stand valve, pres test tbg to 3500# BHP (test good), RIH to retrieve stand valve (could not retrieve, found scale in fish tool), POOH w/ 84 stands in derrick, last jt full of scale, L/D jt & SWIFN
Travel

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 10:00	3 hrs	Category/Rmks:	Run scraper : P/U bit & scraper, RIH w/ tbg & tag @ 6056', L/D 16 jts & circ hole w/ rig pump w/ 5 BPM @ 900#
From 10:00 To 17:00	7 hrs	Category/Rmks:	POOH : Circ well for 3.5 hrs & drop stand valve, pres test tbg to 3500# BHP (test good), RIH to retrieve stand valve (could not retrieve, found scale in fish tool), POOH w/ 84 stands in derrick, last jt full of scale, L/D jt & SWIFN
From 17:00 To 18:00	1 hrs	Category/Rmks:	Travel : Travel

Date :	5/31/2013	Activity:	Acidize	Rig Name:		Days :	8

Daily Report Summary :

Daily Report Detail:

Remarks
Travel
"PU and MU 5 1/2"" BVBP & RTTS. RIH w/ same and test tools above Perfs to 1500psi"
Acidize as per design. Zone #1: 5374-5448 750 gal 15% Hcl w/ chem. Avg rate 1.5 BPM @ 2180. Zone #2: 4816-4832, 500 gal 15% Hcl 2.0 bpm @ 1000psi.
Release tools and Pooh above perfs lay down tbg as needed. SWIFN
Travel

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 12:00	5 hrs	Category/Rmks:	RIH : PU and MU 5 1/2" BVBP & RTTS. RIH w/ same and test tools above Perfs to 1500psi
From 12:00 To 16:00	4 hrs	Category/Rmks:	Acidize : Acidize as per design. Zone #1: 5374-5448 750 gal 15% Hcl w/ chem. Avg rate 1.5 BPM @ 2180. Zone #2: 4816-4832, 500 gal 15% Hcl 2.0 bpm @ 1000psi.
From 16:00 To 17:30	1.5 hrs	Category/Rmks:	POOH : Release tools and Pooh above perfs lay down tbg as needed. SWIFN
From 17:30 To 18:30	1 hrs	Category/Rmks:	Travel : Travel

Date :	6/3/2013	Activity:	POOH	Rig Name:		Days :	11

Daily Report Summary :

Daily Report Detail:

Remarks
Travel
Circulate well
Pooh w/ tools break and dope akk conections
"PU and MU 5 1/2"" Arrow set 1 pkr . Start RIH w/ sameand start testing to 3500 BHP"
Travel

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 8:30	1.5 hrs	Category/Rmks:	Circulate : Circulate well
From 8:30 To 16:30	8 hrs	Category/Rmks:	POOH : Pooh w/ tools break and dope akk conections
From 16:30 To 17:00	1.5 hrs	Category/Rmks:	RIH : PU and MU 5 1/2" Arrow set 1 pkr . Start RIH w/ sameand start testing to 3500 BHP
From 17:00 To 18:00	1 hrs	Category/Rmks:	Travel : Travel

Well Name : UTE TRIBAL 05-16 INJ							
Prospect:	ANTELOPE CREEK				AFE #:	42834	
Sec/Twp/Rge:	5 / 5S / 3W				Operator:	PETROGLYPH	
API #:	43013315270000		Field:	ANTELOPE CREEK	Supervisor:	Leon & Alex	
Work Type:	Downhole Failure		County , St.:	DUCHESNE, UT	Phone:		
Production Current/Expected	Oil:	0 / 0	Gas:	0 / 0	Water:	0 / 0	

Date :	6/4/2013	Activity:	Test	Rig Name:		Days :	12
Daily Report Summary :							
Daily Report Detail:	Remarks Travel Resume RIH testing tbg to 3500BHP and retreive standing valve RD flr, ND Bop and well head, install New tbg head and B-1 flange. circulate 120 bbls Pkr fluid @ 2 bpm. ND well head and set Arrow set 1 w/ 15K tension, NU well head. Preform MIT Test to 1900psi f/ 1 1/2 hrs(ok). Pump 23 bbls down tbg to clear any possible acid that migrated up tbg w/ flow back during MIT Test. SWIFN Travel						

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 10:00	3 hrs	Category/Rmks:	Test tbg : Resume RIH testing tbg to 3500BHP and retreive standing valve
From 10:00 To 11:00	1 hrs	Category/Rmks:	NU : RD flr, ND Bop and well head, install New tbg head and B-1 flange.
From 11:00 To 12:30	1.5 hrs	Category/Rmks:	Circulate : circulate 120 bbls Pkr fluid @ 2 bpm.
From 12:30 To 13:30	1 hrs	Category/Rmks:	NU : ND well head and set Arrow set 1 w/ 15K tension, NU well head.
From 13:30 To 17:00	3.5 hrs	Category/Rmks:	Test : Preform MIT Test to 1900psi f/ 1 1/2 hrs(ok). Pump 23 bbls down tbg to clear any possible acid that migrated up tbg w/ flow back during MIT Test. SWIFN
From 17:00 To 18:00	1 hrs	Category/Rmks:	Travel : Travel

Date :	6/5/2013	Activity:	RDMOL	Rig Name:		Days :	13
Daily Report Summary :							
Daily Report Detail:	Remarks Travel Police loc RDMOL RD Pump and tank(Note Stone released)						

From 6:00 To 7:00	1 hrs	Category/Rmks:	Travel : Travel
From 7:00 To 15:00	8 hrs	Category/Rmks:	RDMOL : Police loc RDMOL RD Pump and tank(Note Stone released)

Casing

DateIn	Setting Depth	Jts Run	Type	Size	Weight	Grade	MINID	HoleDiam	TD
5/25/1995	434	10	3. Surface	8.625	24	J-55	0	12.25	445
6/2/1995	6147.95	137	5. Production	5.5	15.5	J-55	0	7.875	6190

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

JUL 03 2013

Ref: 8ENF-UFO

CERTIFIED MAIL 7009-3410-0000-2599-7884
RETURN RECEIPT REQUESTED

Mr. Les Farnsworth, District Supervisor
Petroglyph Operating Company, Inc.
4116 W 3000 S Ioka Lane
P.O. Box 607
Roosevelt, UT 84066

Re: Underground Injection Control (UIC)
Permission to Resume Injection
Ute Tribal 05-16 Well
EPA Well ID # UT20736-04327
API # 43-013-31527
Antelope Creek Oil Field
Duchesne County, UT

Dear Mr. Farnsworth:

On June 19, 2013, the Environmental Protection Agency (EPA) received information from Petroglyph Operating Company, Inc. on the above referenced well concerning the workover to address a loss of mechanical integrity and the followup mechanical integrity test (MIT) conducted on June 13, 2013. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. §144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before June 13, 2018.

Pursuant to 40 C.F.R. §144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless EPA is notified and procedures are described to EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

May 22, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit #UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised that we have lost the Mechanical Integrity on the Ute Tribal 05-16 Injection Well. We immediately ceased injection on the date referenced. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

May 28, 2013

Don Breffle
Mail Code: 8ENF-UFO
US EPA Region 8
1595 Wyncoop Street
Denver, CO 80202-1129

RE: Underground Injection Control (UIC)
Notice of Violation
Loss of Mechanical Integrity
EPA Permit # UT2736-04327
Well No. Ute Tribal 05-16
Antelope Creek Oil Field
Duchesne County, Utah

Dear Mr. Breffle:

Please be advised, this is the action we plan to take to fix the loss of integrity on the 05-16 injector: we are going to release the packer and pull the tubing, inspecting the tubing as it comes out of the hole, make a bit and scraper run past the perforations, and circulate and clean the well. Tubing will be replaced as needed. We then plan to re-perforate some existing perforations, including C6: 4908-12, 4918-23, 4934-38 which was previously squeezed. Existing perforations will be acidized using a packer and plug for isolation and pumping 15% Hcl through a dedicated tubing string followed by a fresh water over flush.
We will swab the well back to a neutral PH before running in the hole with a new Arrowset 1 Packer, breaking and doping all connections on the way back in, pressure testing the tubing to 3500psi BHP, and performing and MIT on the casing to 1900psi. We will submit the results of the MIT for approval to re-inject. This work is expected to begin immediately. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,
Petroglyph Operating Company, Inc.

Rodrigo Jurado
Regulatory Compliance Specialist

June 17, 2013

EPA
ATTN: Don Breffle
Region 8
1595 Wyncoop Street
Denver, CO 80202-8917

UIC Permit #UT2736-04327
Well ID: Ute Tribal 05-16
Ute Tribal No. 05-16, Duchesne County, Utah

Dear Mr. Breffle,

Please find enclosed the successful MIT test on the above referenced well. This test was performed to provide proof of integrity after we rigged up on the well to address a Mechanical Integrity issue. We initially pulled the packer, inspected the tubing on the way out and replaced 26 joints of pipe. We then ran a bit and scraper past the perforations, circulated the well, and determined the well would benefit from an acid treatment through the existing perforations. We acidized the following: Zone 1: 5374-5448: 750 gal 15% Hcl followed by a 23 Bbl. fresh water over-flush. Zone 2: 4816-4832: 500 gal 15% Hcl followed by a 23 Bbl. fresh water over-flush. We then ran in hole with a new Arrowset 1 Packer, breaking and doping all connections, pressure tested tubing to 3500# BHP and performed an MIT on the casing to 1900# with no loss. No perforations were re-shot as previously planned. Please advise as soon as possible so we may resume injection on this well. Please let us know if there is a need for further action on our part and we will immediately comply. My direct number is 435-722-5302 if you wish to contact us.

Sincerely,

Rodrigo Jurado
Regulatory Compliance Spc.

Encl: MIT

TAB	GREEN	BLUE	CBI
		2	

U2 Entered
Date 6/27/13
Initial JB

Mechanical Integrity Test
Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency
Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW
999 18th Street, Suite 500 Denver, CO 80202-2466

EPA Witness: _____ Date: 6/10/13

Test conducted by: Boyd Cook

Others present: _____

Well Name: 0546 Type: ER SWD Status: AC TA UC

Field: ANTELOPE CREEK

Location: 0546 Sec: ____ T ____ N/S R ____ E/W County: DUCHESNE State: UT

Operator: PETROGLYPH ENERGY

Last MIT: / / Maximum Allowable Pressure: _____ PSIG

Is this a regularly scheduled test? [ ] Yes [ ] No

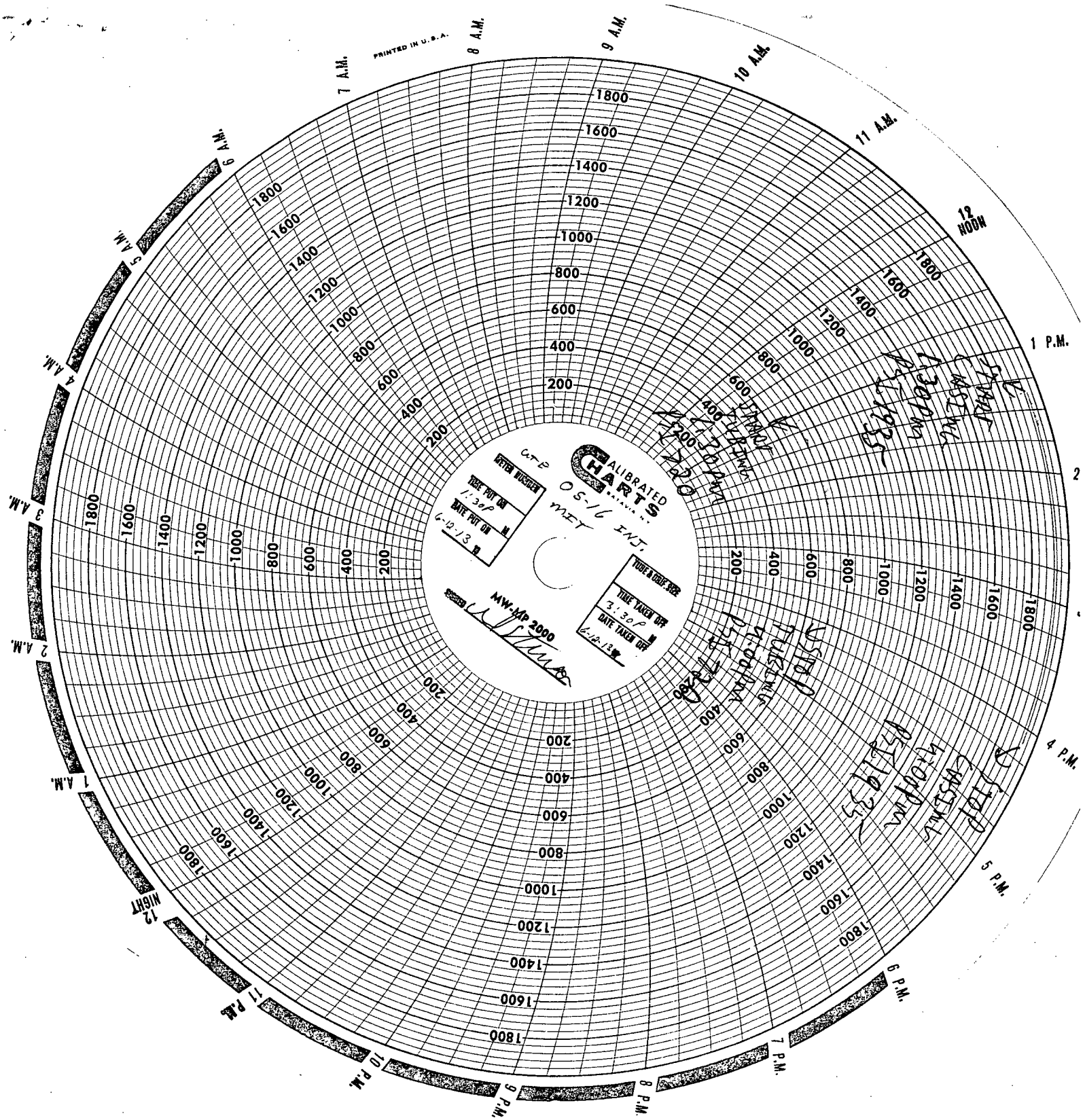
Initial test for permit? [ ] Yes [ ] No

Test after well rework? [X] Yes [ ] No

Well injecting during test? [ ] Yes [X] No If Yes, rate: _____ bpd

Pre-test casing/tubing annulus pressure: _____ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
TUBING PRESSURE			
Initial Pressure	720 psig	psig	psig
End of test pressure	720 psig	psig	psig
CASING / TUBING ANNULUS PRESSURE			
0 minutes	1935 psig	psig	psig
5 minutes	1935 psig	psig	psig
10 minutes	1935 psig	psig	psig
15 minutes	1935 psig	psig	psig
20 minutes	1935 psig	psig	psig
25 minutes	1935 psig	psig	psig
30 minutes	1935 psig	psig	psig
2 1/2 Hours minutes	1935 psig	psig	psig
minutes	psig	psig	


PRINTED IN U.S.A.
CALIBRATED CHARTS
METER RUN SIZE
TIME PUT ON
1:30P
DATE PUT ON
6-12-13
TUBE & ORIF. SIZE
TIME TAKEN OFF
3:30P
DATE TAKEN OFF
6-12-13
MW-MP 2000
12 NOON
1 P.M.
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5 P.M.
6 P.M.
7 P.M.
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11 P.M.
12 MIGHT
1 A.M.
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3 A.M.
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10 A.M.
11 A.M.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

Ref: 8P2-W-GW

APR -3 1997

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. April Menzies
Geology/Petroleum Engineering Technician
Petroglyph Operating Company, Inc.
P. O. Box 1839
Hutchinson, KS 67504-1839

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject
Ute Tribal #05-16 (UT04327)
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

Dear Ms. Menzies:

Thank you for the recently submitted information pertaining to the above-referenced area permit and well. The Well Rework Record, injection zone fluid pore pressure survey, and the successfully run mechanical integrity test on the Ute Tribal #05-16 (UT2736-04327) have been reviewed and approved. Petroglyph has complied with all of the pertinent permit conditions (Part II, Section C. 2.) for the Antelope Creek Waterflood area permit.

Pleased be advised that administrative approval has been granted for injection of Class II fluids into the above referenced well for enhanced recovery of oil and gas. Please also be aware of the monitoring, recordkeeping and reporting requirements described in Part II, Section D of the permit and that the current **maximum surface injection pressure (Pmax) is limited to 1915 psig**, as modified by UIC Permit Minor Modification dated June 19, 1996.

Upon receipt of this letter, the Compliance Officer, Mr. John Carson will then take over routine matters involving well operations, future correspondence, forms, and reports. Please direct all correspondence to the attention of Mr. Carson at the above letterhead **(MAIL CODE ENF-T)** or contact Mr. Carson at (303) 312-6203. Thank you for your continued cooperation.

Sincerely,

D. Edwin Hogle
Director, Groundwater Program
Office of Pollution Prevention
State and Tribal Assistance

UNITED STATES ENVIRONMENTAL PRO
REGION VIII
999 18th STREET - SUITE 5
DENVER, COLORADO 80202-

Scan under UT20736-04327 Authorization to Inject - Final

Ref: 8P2-W-GW

APR -3 1997

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. April Menzies
Geology/Petroleum Engineering Technician
Petroglyph Operating Company, Inc.
P. O. Box 1839
Hutchinson, KS 67504-1839

RE: UNDERGROUND INJECTION CONTROL (UIC)
Authorization to Inject
Ute Tribal #05-16 (UT04327)
Antelope Creek Waterflood
EPA Area Permit No. UT2736-00000
Duchesne County, Utah

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Upon receipt of this letter, the Compliance Officer, Mr. John Carson will then take over routine matters involving well operations, future correspondence, forms, and reports. Please direct all correspondence to the attention of Mr. Carson at the above letterhead **(MAIL CODE ENF-T)** or contact Mr. Carson at (303) 312-6203. Thank you for your continued cooperation.

Sincerely,

D. Edwin Hogle
Director, Groundwater Program
Office of Pollution Prevention
State and Tribal Assistance

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

JUN 19 1996

Ref: 8P2-W-GW

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Ms. Angela R. Ely
Administrative Operations Manager
Petroglyph Operating Company, Inc.
6209 North Highway 61
Hutchinson, Kansas 67502

RE: **UIC Permit Minor Modification**
Conversion of Additional Wells (5)
Antelope Creek Waterflood
EPA Area Permit UT2736-00000
Duchesne County, Utah

Dear Ms. Ely:

Your letter of April 3, 1996, requesting that the following five (5) wells be converted to Class II enhanced oil recovery wells and added to the Antelope Creek Waterflood, as authorized under EPA Area Permit UT2736-00000, is hereby granted.

NAME	LOCATION	EPA PERMIT NO.
Ute Tribal 04-01	NE NE Section 4	UT2736-04322
Ute Tribal 05-08	SE NE Section 5	UT2736-04324
Ute Tribal 29-08A	SE NE Section 29	UT2736-04325
Ute Tribal 05-16	SE SE Section 5	UT2736-04327
Ute Tribal 04-05	SW NW Section 4	UT2736-04328

These additional wells are within the boundary of the existing area permit for the Antelope Creek Waterflood (UT2736-00000), and this addition is made by minor permit modification according to the terms and conditions of that permit. Unless specifically mentioned in the Minor Permit Modification, all terms and conditions of the original permit will apply to the construction, operation, monitoring, and plugging and abandonment of these additional injection wells. The proposed well location, well schematic, conversion procedures, and revised plugging and abandonment plans and schematics submitted by your office have been reviewed and approved as follows:

(1) The **construction** of these wells have been reviewed and found satisfactory as submitted, therefore, no corrective action is required.

(2) **Maximum injection pressure (Pmax)** for these wells are a follows:

Pmax = [Fg - 0.433 (Sg)] d

Where: Pmax = Maximum surface injection pressure at wellhead
d = 4283' shallowest perforations of the five (5) wells
Sg = Specific gravity of injected water

Pmax = [0.88 - .433 (1.00)] 4283

Pmax = 1915 psig

Until such time as the permittee demonstrates that a fracture pressure other than 1915 psig applies to the disposal zones, of the newly converted wells, the maximum allowable wellhead injection pressure **(Pmax) for the these wells will be 1915 psig.**

(3) The **plugging and abandonment plans and schematics**, submitted by your office, have been reviewed and approved subject to the following changes:

(a) Prior to, or in conjunction with the emplacement of the surface plug (plug #3 in the primary plan of the permit) in the production casing, the production casing is to perforated 2', w/4 spf, at a point 50' below the surface casing shoe and cement squeeze the perfs to 50' above the shoe. Pull out of hole (POOH) leaving a 100' cement plug inside the production casing.

(b) The production/surface casing annulus will also be cemented from surface to a depth of 50'. A similar plug (50' to surface) will be left inside of the production casing (plug #4 in the primary plan of the permit).

Prior to commencing injection into the above five (5) wells, permittee must fulfill permit condition Part II, C. 2. and have received **written authorization** to inject by the EPA Director. In summary, these requirements for your newly permitted injection wells are:

(1) All conversion is complete and the permittee has submitted a completed **Well Rework Record (EPA Form 7520-12)**.

(2) The **pore pressure has been determined.**

(3) The well has successfully completed and passed a **mechanical integrity test (MIT)**, guidance enclosed.

All other provisions and conditions of the permit remain as originally issued.

If you have any questions, please contact Mr. Chuck Williams at the above letterhead address, citing **MAIL CODE 8P2-W-GW** or telephone Mr. Williams at (303) 312-6625. Thank you for your continued cooperation.

Sincerely,

Kerrigan G. Clough
Assistant Regional Administrator
Office of Pollution Prevention,
State and Tribal Assistance

Enclosures: Schematics - Conversion
MIT Guidance and EPA Forms
Well Rework Record EPA Form 7520-12

cc w/Enclosures: Mr. Ferron Secakuku
Energy & Mineral Resource Dep't.
Ute Indian Tribe

Mr. Luke Duncan, Chairman
Uintah & Ouray Business Committee
Northern Ute Tribe

Mr. Norman Cambridge
Uintah & Ouray Agency
BIA

Mr. Gil Hunt
State of Utah Natural Resources
Division of Oil, Gas, and Mining

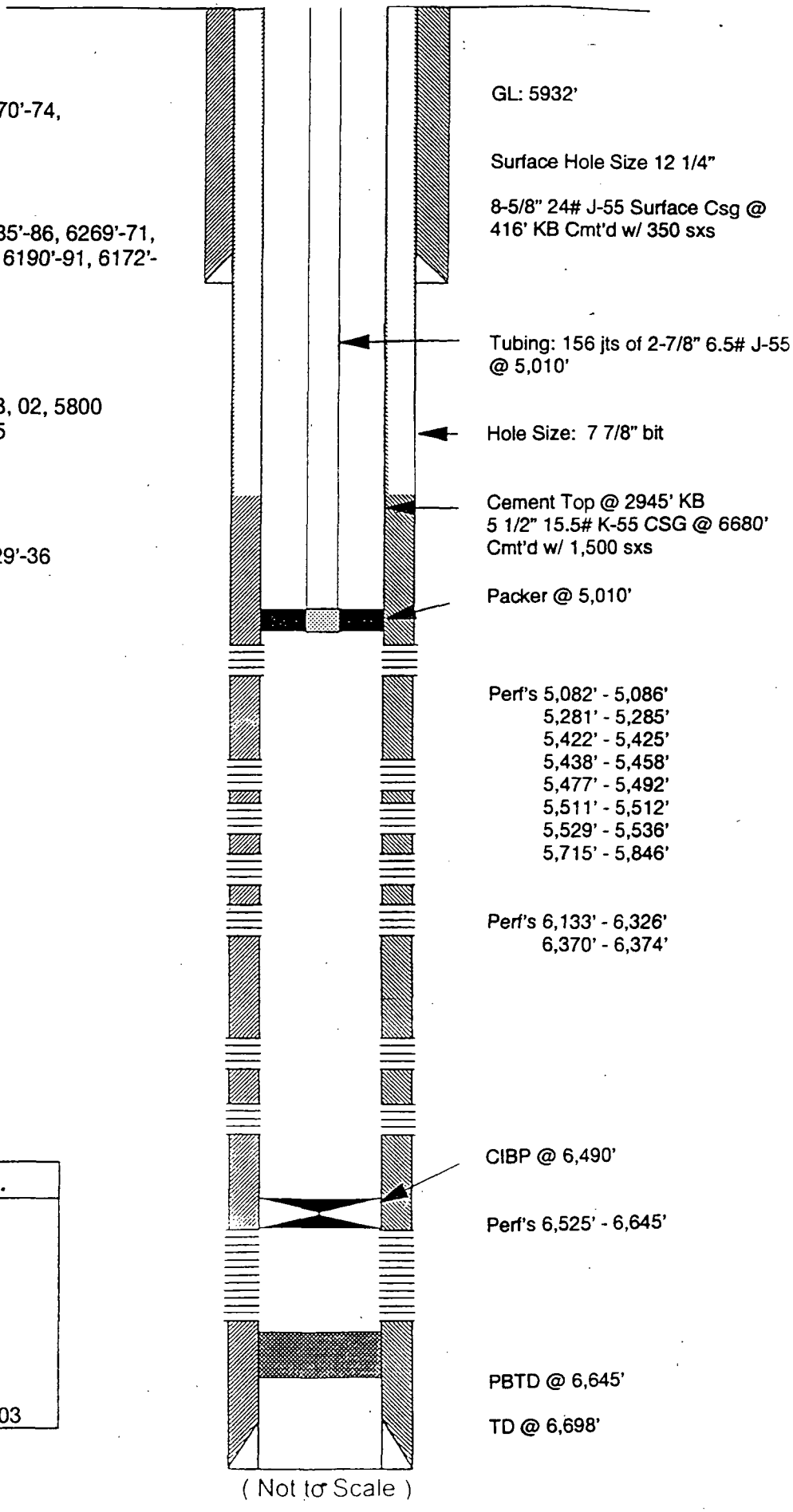
Mr. Jerry Kenczka
BLM - Vernal District Office

Ute Tribal #04-01
Wellbore Diagram
After Conversion

Well History:

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'-74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production

Tubing Detail: 2' psp Packer, 156 jts



(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-01

(1331' FNL & 1277' FEL)

NE NE Section 24-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 30762: Lease #14-20-H62-3503

Ute Tribal #05-08
Wellbore Diagram
After Conversion

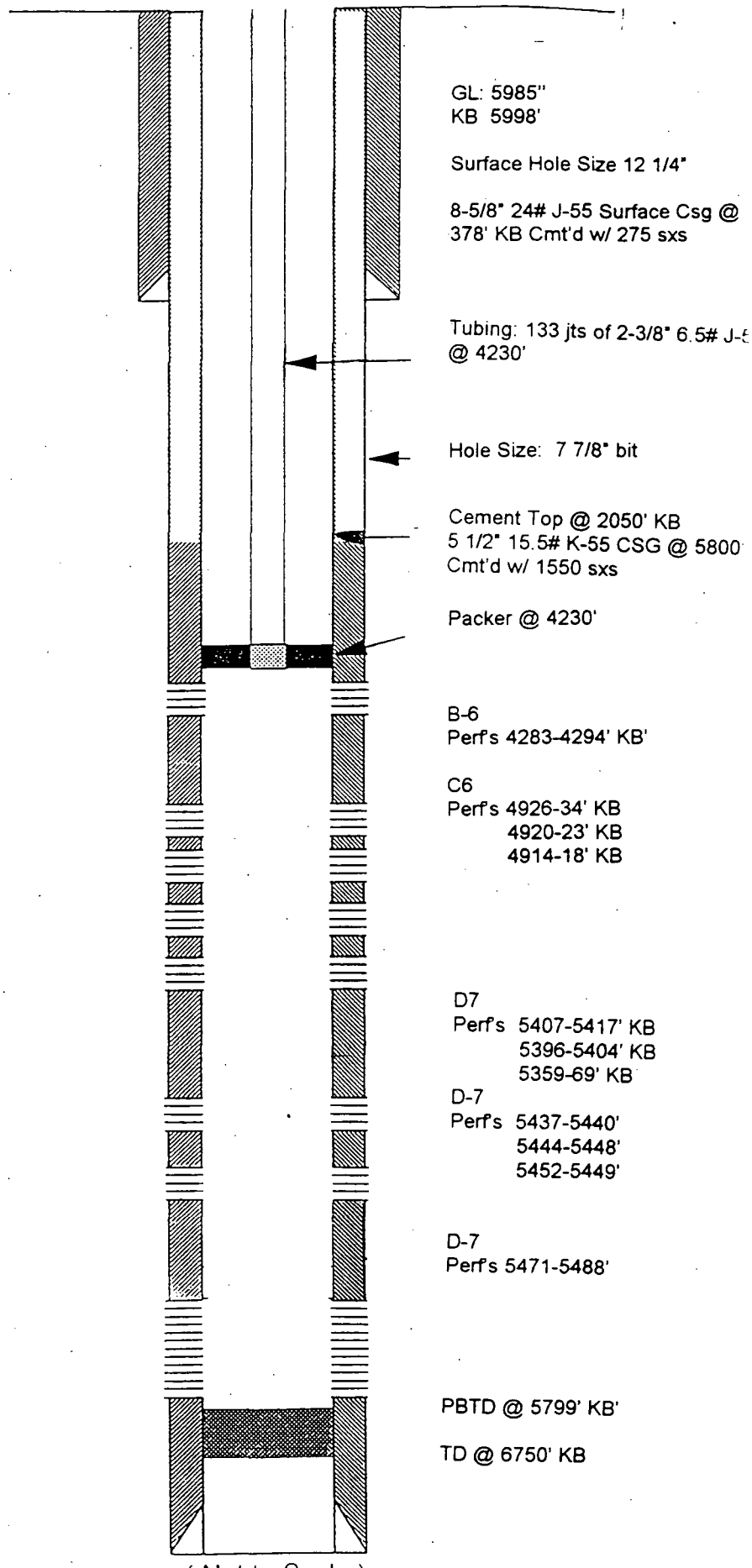
Well History

8/21/91 Spud Well

9/21/91 Perf'd D7 5471-88, 5449-52,5444-48,5437-40
Brk Dwn 2% Kcl water
Frac'd 120,000 # sand
ISIP 2,320 psi

10/27/91 Perf'd B6 4283-94
Frac'd 114,500# sand
ISIP 1000 psi

8/24/95 Pump Changes



(Not to Scale)

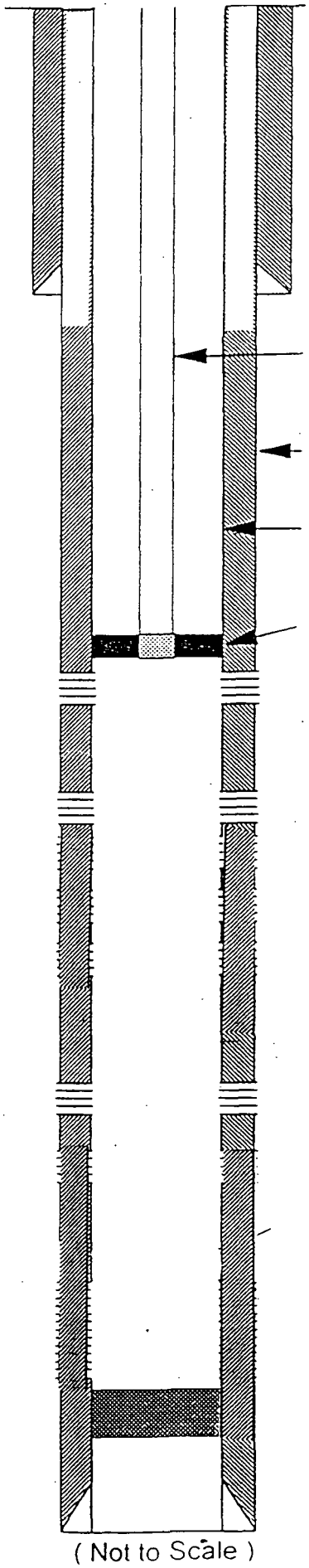
Petroglyph Operating Co., Inc.

Ute Tribal 05-08

(2500' FNL & 550' FEL)

SE NE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31306: Lease #14-20-H62-4650

Ute Tribal #29-08A
Wellbore Diagram
After Conversion



GL: 6558'
KB 6571'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 412' KB Cmt'd w/ 275 sxs

2 3/8" 4.70 J-55 EUE tubing 149 joints

Hole Size: 7 7/8" bit

Cement Top @ 420' KB
5 1/2" 15.5# K-55 CSG @ 6074'
5 1/2" casing heaters 4810-20', 4674-88' KB

Cmt'd w/ 850 sxs

Packer @ 4620' KB'

C-4
Perf's 4678-4686' KB

C-6
Perf's 4812-4818' KB

E-1
Perf's 5566-5578' KB

PBTD @ 5964' KB'

TD @ 6700' KB

(Not to Scale)

Well History:

9/9/91	Spud Well "Coors"
9/12/91	Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.
9/25/91	Perf'd 4812-18' Brk Dwn 7½% HCl Frac'd 85,000# sand ISIP 2,000 psi
10/4/91	Perf'd 4678-86' Brk Dwn 7½% Acid Frac'd 100,00# sand ISIP 2,910 psi
10/15/91	Put well on production

Petroglyph Operating Co., Inc.

Ute Tribal 29-08A

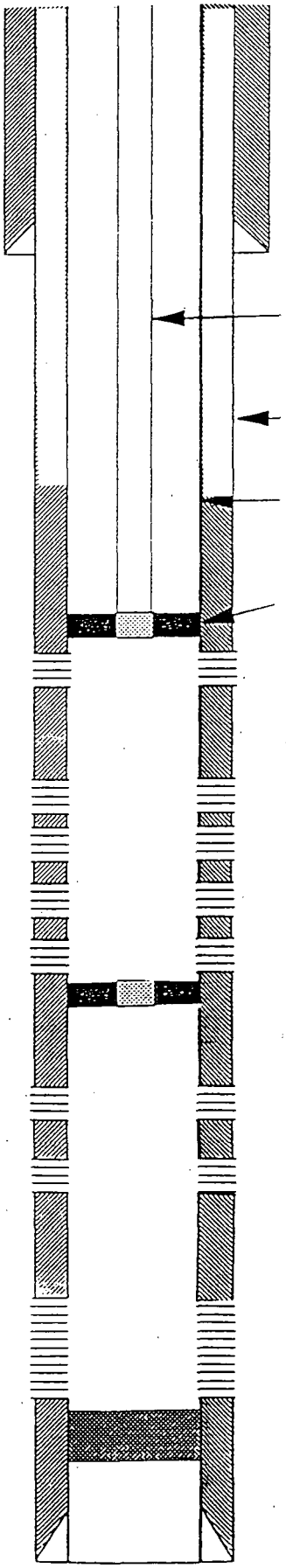
(2600' FNL & 600' FEL)

SE NE Section 29-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013-31305: Lease #14-20-H62-3518

Ute Tribal #05-16
Wellbore Diagram
After Conversion

Well History:

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand , ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Sqeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



GL: 6049'
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 434 KB Cmt'd w/ 225 sxs

Tubing: 154 jts of 2-3/8" 6.5# J-55 @ 4770' KB

Hole Size: 7 7/8" bit

Cement Top @ 2750' KB
5 1/2" 15.5# K-55 CSG @ 6147"
Cmt'd w/ 440 sxs

Packer @ 4770' KB

C-5
Perf's 4827-32' KB
4816-20' KB 4816

C6
Perf's 4934-38' KB
4908-12' KB
4918-23' KB

RTBP set at 5080' KB

D-3
Perf's 5201-06' KB
Cement Squeezed'

D-7
Perf's 5438-42' KB 5442'
5414-17'
5396-5400'
5390-92'
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

(Not to Scale)

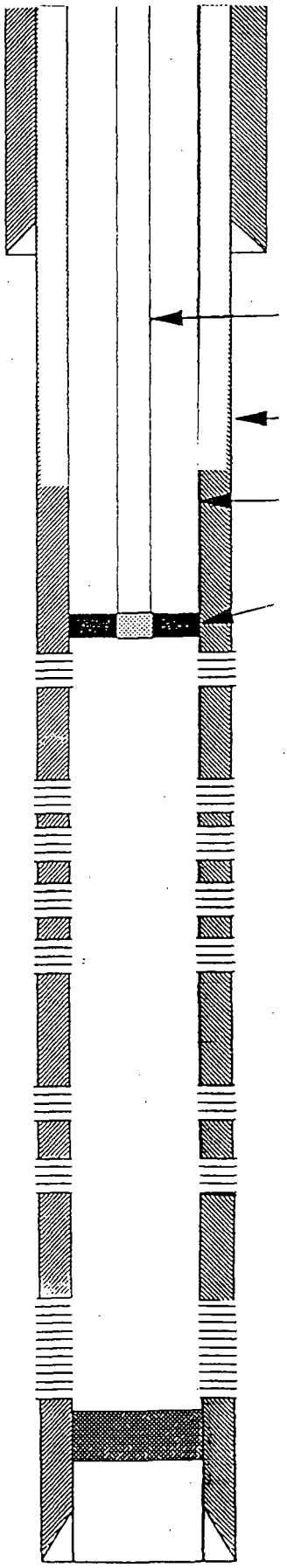
Petroglyph Operating Co., Inc.

Ute Tribal 05-16

(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31527: Lease #14-20-H62-3504

Ute Tribal #04-05
Wellbore Diagram
After Conversion



GL: 5997'
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @
425 KB Cmt'd w/ 350 sxs

Tubing: 139 jts of 2-3/8" 4.7# J-55
@ 4298' KB'

Hole Size: 7 7/8" bit

Cement Top @ 2450' KB
5 1/2" 15.5# K-55 CSG @ 5736"
Cmt'd w/ 1450 sxs

Packer @ 4298'

B-6
Perf's 4328-36' KB'

B-11
Perf's 4564-72' KB

C-5
Perf's 4848-52' KB

C6
Perf's 4942-48

D-3
Perf's 5228-31' KB

D-7
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

(Not to Scale)

Well History:

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60,5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
11/9/95	Perf'd B11 4564-72 Frac'd 27,700# sand ISIP 1,918 psi
11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
12/30/95	Date of First Production

Petroglyph Operating Co., Inc.

Ute Tribal 04-05

(2725' FNL & 660' FWL)

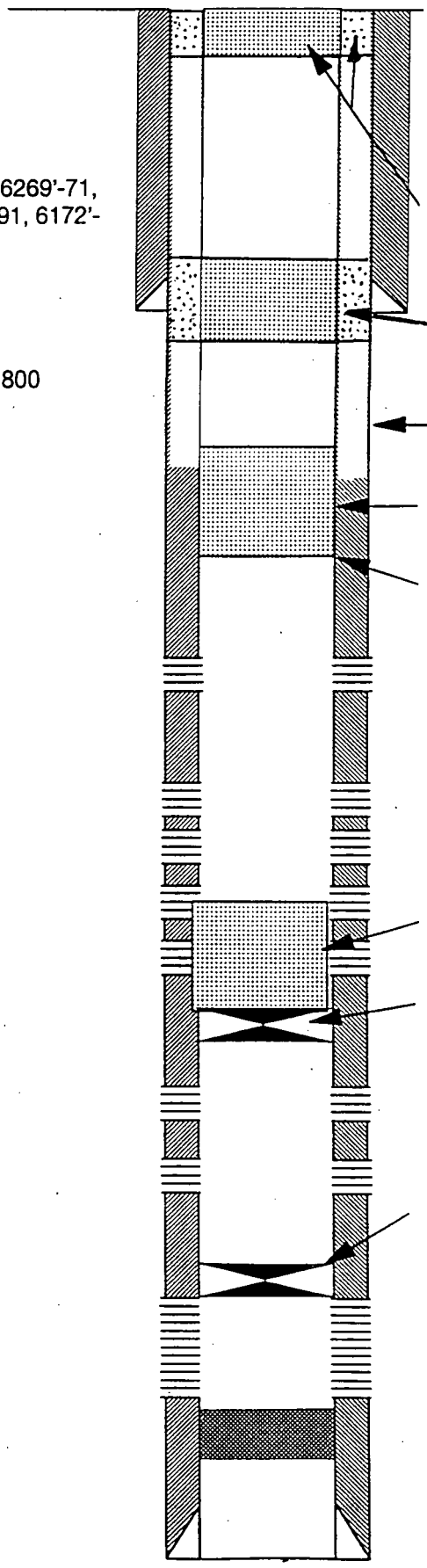
SW NW Section 4-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31462: Lease #14-20-H62-3503

Ute Tribal #04-0
Wellbore Diagram
Plugged

Well History:

5/30/83	Spud Well "Coors"
6/24/83	Perf'd 6645'-35, 6525'-30, 6370'-74, Brk Dwn 2% KCl water Frac'd 76,500# sand ISIP 2,500 psi
6/30/83	Perf'd 6325'-26, 6311'-12, 6285'-86, 6269'-71, 6253'-54, 6248'-49, 6229'-31, 6190'-91, 6172'-74, 6160'-67, 6133'-40 Brk Dwn 7½% HCl Frac'd 90,000# sand ISIP 2,500 psi
9/8/83	Perf'd 5846, 43, 40, 36, 04, 03, 02, 5800 Perf'd 5743, 33, 29, 25, 21, 15 Brk Dwn 7½% Acid Frac'd 100,716# sand ISIP 2,700 psi
11/18/83	Perf'd 5477'-92, 5111'-15, 5529'-36 Frac'd 36,000# sand ISIP 2,000 psi
8/22/84	Perf'd 5082'-86, 5281'-85 Frac'd 100,000# sand
7/26/90	Pump Changes
2/7/92	Well Shut In
11/27/92	Acid job Put well back on production

Tubing Detail: 2' psp Packer, 156 jts



GL: 5932'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 416' KB Cmt'd w/ 350 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Hole Size: 7 7/8" bit

Cement Top @ 2945' KB
5 1/2" 15.5# K-55 CSG @ 6680'
Cmt'd w/ 1,500 sxs

30 sxs Class "G" cement
4600' to 4800' (200')

Perf's 5,082' - 5,086'
5,281' - 5,285'
5,422' - 5,425'
5,438' - 5,458'
5,477' - 5,492'
5,511' - 5,512'
5,529' - 5,536'
5,715' - 5,846'

30 sxs Class "G" cement
5400'-5600' (200')

CIBP @ 5600' KB

Perf's 6,133' - 6,326'
6,370' - 6,374'

CIBP @ 6,490'

Perf's 6,525' - 6,645'

PBTD @ 6,645'

TD @ 6,698'

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-01

(1331' FNL & 1277' FEL)

NE NE Section 24-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 30762: Lease #14-20-H62-3503

Ute Tribal #05-0
Wellbore Diagram
Plugged

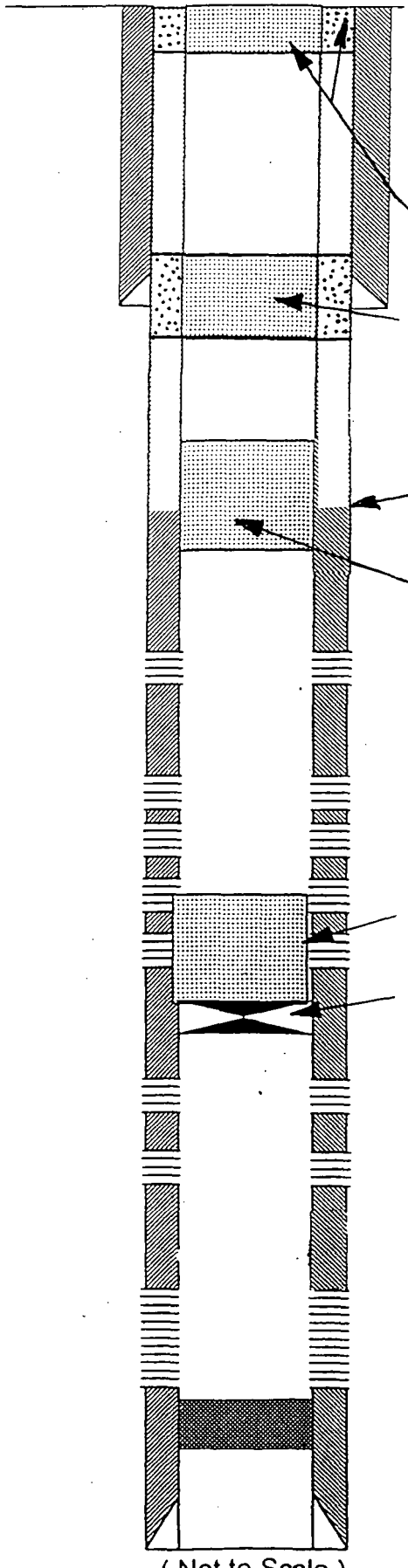
Well History

8/21/91 Spud Well

9/21/91 Perf'd D7 5471-88, 5449-52,5444-48,5437-40
Brk Dwn 2% Kcl water
Frac'd 120,000 # sand
ISIP 2,320 psi

10/27/91Perf'd B6 4283-94
Frac'd 114,500# sand
ISIP 1000 psi

8/24/95 Pump Changes



GL: 5985"
KB 5998'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg (
378' KB Cmt'd w/ 275 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2050' KB
5 1/2" 15.5# K-55 CSG @ 5800'
Cmt'd w/ 1550 sxs

30 sxs Class G cement'
3800' to 4000' KB (200')

B-6
Perf's 4283-4294' KB'

C6
Perf's 4926-34' KB
4920-23' KB
4914-18' KB

CIBP 5300' KB
30 sxs Class "G" cement
5300' 5100' KB (200')

D7
Perf's 5407-5417' KB
5396-5404' KB
5359-69' KB

D-7
Perf's 5437-5440'
5444-5448'
5452-5449'

D-7
Perf's 5471-5488'

PBTD @ 5799' KB'

TD @ 6750' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 05-08

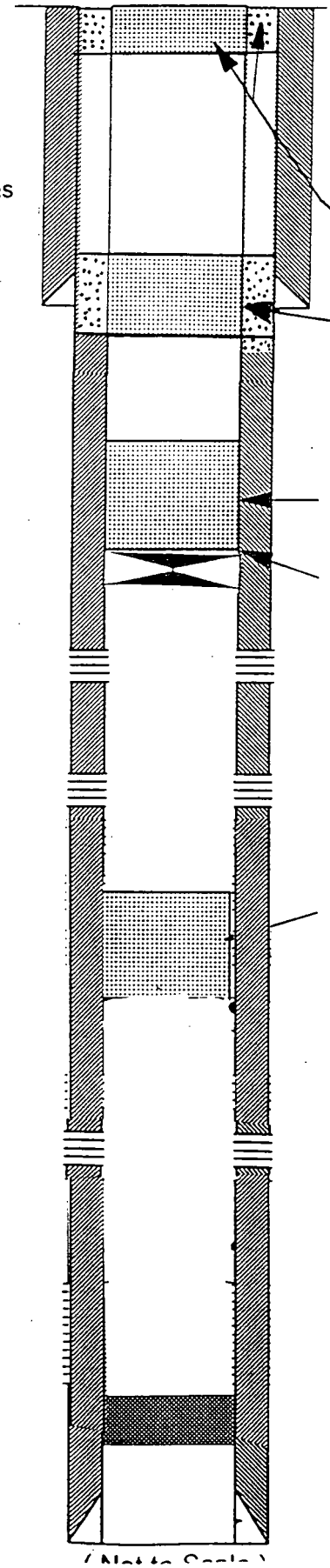
(2500' FNL & 550' FEL)

SE NE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31306: Lease #14-20-H62-4650

Ute Tribal #29-08A
Wellbore Diagram
Plugged

Well History:

9/9/91	Spud Well "Coors"
9/12/91	Ran 5 1/2" casing with electric heater sections in 5 1/2" casing string 4810-20, 4674-88' KB.
9/25/91	Perf'd 4812-18' Brk Dwn 7½% HCl Frac'd 85,000# sand ISIP 2,000 psi
10/4/91	Perf'd 4678-86' Brk Dwn 7½% Acid Frac'd 100,00# sand ISIP 2,910 psi
10/15/91	Put well on production



GL: 6558'
KB 6571' '

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 412' KB Cmt'd w/ 275 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 420' KB
5 1/2" 15.5# K-55 CSG @ 6074'
5 1/2" casing heaters
4810-20', 4674-88' KB

Cmt'd w/ 850 sxs

CIBP @ 4600' KB'

30 sxs Class "G" cement
4400-4600' KB (200')

C-4
Perf's 4678-4686' KB

C-6
Perf's 4812-4818' KB

30 sxs Class "G" cement
4400-4600' KB (200')

E-1
Perf's 5566-5578' KB

PBTD @ 5964' KB'

TD @ 6700' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 29-08A

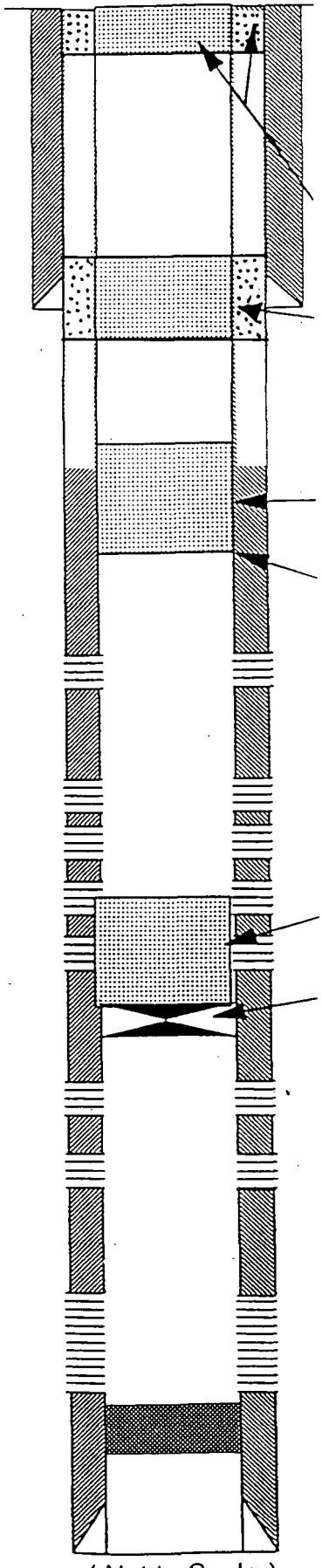
(2600' FNL & 600' FEL)

SE NE Section 29-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013-31305: Lease #14-20-H62-3518

Ute Tribal #05-16
Wellbore Diagram
Plugged

Well History:

5/24/95	Spud Well
10/12/95	Perf'd D-7 5438-42, 5414-17', 5396-5400', 5390-92', 5374-80', Brk Dwn 2% KCl water Frac'd 57,400# sand ISIP 2,495 psi
10/13/95	Perf'd D-3 5201-06' KB Brk Dwn 2% KCL water Frac'd 29,500# sand ISIP 1980
10/19/95	Sqeeze cemented D-3 Perfs
10/20/95	Perf'd C-5 4827-32, 4816-20 Perf'd C-6 4934-38, 4908-12, 4918-23 Brk Dwn 2% KCL water Frac'd 67,800# sand ISIP 2070 psi
4/1/96	Re Frac C-6 sand Frac'd 25,500# sand ISIP 1,662 psi



GL: 6049'
KB 6059'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @ 434 KB Cmt'd w/ 225 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2750' KB
5 1/2" 15.5# K-55 CSG @ 6147"
Cmt'd w/ 440 sxs

30 sxs Class "G" cement
4800'-4600' (200')

C-5
Perf's 4827-32' KB
4816-20' KB
C6
Perf's 4934-38' KB
4908-12' KB
4918-23' KB
D-3
Perf's 5201-06' KB
Cement Squeezed'

30 sxs Class "G" cement
5300-5100' (200;)
CIBP 5300'

D-7
Perf's 5438-42' KB
5414-17'
5396-5400'
5390-92'
5374-80'

PBTD @ 6088' KB'

TD @ 6190' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 05-16

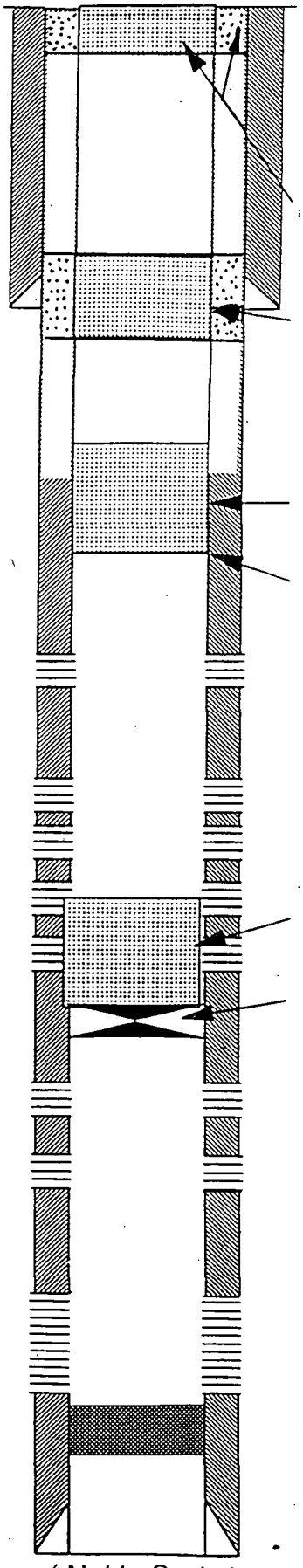
(708' FSL & 523' FEL)

SE SE Section 5-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31527: Lease #14-20-H62-3504

Ute Tribal #04-05
Wellbore Diagram
Plugged

Well History:

5/2/95	Spud Well
10/26/95	Perf'd D-7 5500-04, 5454-60,5418-22 5382-88, 5359-68, 5348-50, Brk Dwn 2% KCl water Frac'd 158,400# sand ISIP 1,950 psi
10/30/95	Perf'd D-3 5228-31 Brk Dwn 2% KCL water Frac'd 22,940# sand ISIP Screen out
11/3/95	Perf'd C5 4848-52 Perf'd C6 4942-48 Brk Dwn 2% KCL water Frac'd 66020# sand ISIP 1,772 psi
11/9/95	Perf'd B11 4564-72 Frac'd 27,700# sand ISIP 1,918 psi
11/14/95	Perf'd B6 4328-36 Frac'd 33,280# sand ISIP 2,078 psi
12/30/95	Date of First Production



GL: 5997'
KB 6007'

Surface Hole Size 12 1/4"

8-5/8" 24# J-55 Surface Csg @
425 KB Cmt'd w/ 350 sxs

Set a cement plug inside of the 5-1/2" casing, surface to 50'. A similiar plug in the 5-1/2" x 8-5/8" annulus.

Perforate production casing for 2', w/4 spf, at a point 50' below surface casing shoe, cement squeeze perfs, POOH leaving 100' cement plug inside 5-1/2" production casing, 50' above and 50' below surface casing shoe.

Cement Top @ 2450' KB
5 1/2" 15.5# K-55 CSG @ 5736"
Cmt'd w/ 1450 sxs

30 sxs Class "G" cement
3800' - 4000' KB (200')

B-6
Perf's 4328-36' KB'

B-11
Perf's 4564-72' KB

C-5
Perf's 4848-52' KB

C6
Perf's 4942-48

30 sxs Class "G" cement
5300' 5100' KB (200')
CIBP 5300' KB

D-3
Perf's 5228-31' KB

30 sxs Class "G" cement
5300' 5100' KB (200')
CIBP 5300' KB

D-7
Perf's 5504-5348' KB

PBTD @ 6190' KB'

TD @ 6453' KB

(Not to Scale)

Petroglyph Operating Co., Inc.

Ute Tribal 04-05

(2725' FNL & 660' FWL)

SW NW Section 4-T5S-R3W
Antelope Creek Field
Duchesne Co, Utah
API #43-013 31462: Lease #14-20-H62-3503

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VIII
999 18th STREET - SUITE 500
DENVER, COLORADO 80202-2466

JUL -6 1995

Ref: 8WM-DW

MEMORANDUM

SUBJECT: **Final Guidance for Conducting a Pressure Test to Determine if a Well Has Leaks in the Tubing, Casing or Packer**

FROM: Tom Pike, Chief UIC Direct Implementation

TO: UIC Direct Implementation Permit Writers

Introduction

The Underground Injection Control (UIC) regulations require that an injection well have mechanical integrity at all times (40 CFR 144.28 (f)(2) and 40 CFR 144.51 (q)(1)). A well has mechanical integrity (40 CFR 146.8) if:

(1) There is no significant leak in the tubing, casing or packer; and

(2) There is no significant fluid movement into an underground source of drinking water (USDW) through vertical channels adjacent to the injection wellbore.

Definition: Mechanical Integrity Pressure Test for Part I. A pressure test used to determine the integrity of all the downhole components of an injection well, usually tubing,casing and packer. It is also used to test tubing cemented in the hole by using a tubing plug or retrievable packer. Pressure tests must be run at least once every five years. **If for any reason the tubing/packer is pulled, the injection well is required to pass another mechanical integrity test of the tubing casing and packer prior to recommencing injection regardless of when the last test was conducted. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on either the attached form or an equilivant form containing the necessary information. A pressure recording chart documentating the actual annulus test pressures must be attached to the form.**

This guidance addresses making a determination of Part I of Mechanical Integrity (no leaks in the tubing, casing or

packer). The Region's policy is: 1) to determine if there are significant leaks in the tubing, casing or packer; 2) to assure that the casing can withstand pressure similar to that which would be applied if the tubing or packer fails; 3) to make the Region's test procedure consistent with the procedures utilized by other Region VIII Primacy programs; and 4) to provide a procedure which can be easily administered and is applicable to all class I and II wells. Although there are several methods allowed for determining mechanical integrity, the principal method involves running a pressure test of the tubing/casing annulus. Region VIII's procedure for running a pressure test is intended to aid UIC field inspectors who witness pressure tests for the purpose of demonstrating that a well has Part I of Mechanical Integrity. The guidance is also intended as a means of informing operators of the procedures required for conducting the test in the absence of an EPA inspector.

Pressure Test Description

Test Frequency

The mechanical integrity of an injection well must be maintained at all times. Mechanical integrity pressure tests are required at least every five (5) years. **If for any reason the tubing/packer is pulled, however, the injection well is required to pass another mechanical integrity test prior to recommencing injection regardless of when the last test was conducted. The Regional UIC program must be notified of the workover and the proposed date of the pressure test. The well's test cycle would then start from the date of the new test if the well passes the test and documentation is adequate.** Tests may be required on a more frequent basis depending on the nature of the injectate and the construction of the well (see Section guidance on MITs for wells with cemented tubing and regulations for Class I wells).

Region VIII's criteria for well testing frequency is as follows:

1. Class I hazardous waste injection wells; initially [40 CFR 146.68(d)(1)] and annually thereafter;

2. Class I non-hazardous waste injection wells; initially and every two (2) years thereafter, except for old permits (such as the disposal wells at carbon dioxide extraction plants which require a test at least every five years);

3. Class II wells with tubing, casing and packer; initially and at least every five (5) years thereafter;

4. Class II wells with tubing cemented in the hole; initially and every one (1) or two (2) years thereafter depending on well specific conditions (See Region VIII UIC Section Guidance #36);

5. Class II wells which have been temporarily abandoned (TAd) must be pressure tested after being shut-in for two years; and

6. Class III uranium extraction wells; initially.

Test Pressure

To assure that the test pressure will detect significant leaks and that the casing is subjected to pressure similar to that which would be applied if the tubing or packer fails, the tubing/casing annulus should be tested at a pressure equal to the maximum allowed injection pressure or 1000 psig whichever is less. The annular test pressure must, however, have a difference of at least 200 psig either greater or less than the injection tubing pressure. Wells which inject at pressures of less than 300 psig must test at a minimum pressure of 300 psig, and the pressure difference between the annulus and the injection tubing must be at least 200 psi.

Test Criteria

1. The duration of the pressure test is 30 minutes.

2. Both the annulus and tubing pressures should be monitored and recorded every five (5) minutes.

3. If there is a pressure change of 10 percent or more from the initial test pressure during the 30 minute duration, the well has failed to demonstrate mechanical integity and should be shut-in until it is repaired or plugged.

4. A pressure change of 10 percent or more is considered significant. If there is no significant pressure change in 30 minutes from the time that the pressure source is disconnected from the annulus, the test may be completed as passed

Recordkeeping and Reporting

The test results must be recorded on the attached form. The annulus pressure should be recorded at five (5) minute intervals. **Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on the attached form or an equilivant form . A pressure recording chart documentating the actual annulus test pressures must be attached to the submittal.** The tubing pressure at the beginning and end of each test must be recorded. The volume of the annulus fluid bled back at the surface after the test should be measured and recorded on the form. This can be done by bleeding the annulus pressure off and discharging the associated fluid into a five gallon container. The volume information can be used to verify the approximate location of the packer.

Procedures for Pressure Test

1. Scheduling the test should be done at least two (2) weeks in advance.

2. Information on the well completion (location of the packer, location of perforations, previous cement work on the casing, size of casing and tubing, etc.) and the results of the previous MIT test should be reviewed by the field inspector in advance of the test. Regional UIC Guidance #35 should also be reviewed. Information relating to the previous MIT and any well workovers should be reviewed and taken into the field for verification purposes.

3. All Class I wells and Class II SWD wells should be shut-in prior to the test. A 12 to 24-hour shut-in is preferable to assure that the temperature of the fluid in the wellbore is stable.

4. Class II enhanced recovery wells may be operating during the test, but it is recommended that the well be shut-in if possible.

5. The operator should fill the casing/tubing annulus with inhibited fluid at least 24 hours in advance, if possible. Filling the annulus should be undertaken through one valve with the second valve open to allow air to escape. After the operator has filled the annulus, a check should be made to assure that the annulus will remain full. If the annulus can not maintain a full column of fluid, the operator should notify the Director and begin a rework. The operator should measure and report the volume of fluid added to

the annulus. If not already the case, the casing/tubing valves should be closed, at least, 24 hours prior to the pressure test.

Following steps are at the well:

6. Read tubing pressure and record on the form. If the well is shut-in, the reported information on the actual maximum operating pressure should be used to determine test pressures.

7. Read pressure on the casing/tubing annulus and record value on the form. If there is pressure on the annulus, it should be bled off prior to the test. If the pressure will not bleed-off, the guidance on well failures (Region VIII UIC Section Guidance #35) should be followed.

8. Ask the operator for the date of the last workover and the volume of fluid added to the annulus prior to this test and record information on the form.

9. Hook-up well to pressure source and apply pressure until test value is reached.

10. Immediately disconnect pressure source and start test time. (If there has been a significant drop in pressure during the process of disconnection, the test may have to be restarted.) The pressure gages used to monitor injection tubing pressure and annulus pressure should have a pressure range which will allow the test pressure to be near the mid-range of the gage. Additionally, the gage must be of sufficient accuracy and scale to allow an accurate reading of a 10 percent change to be read. For instance, a test pressure of 600 psi should be monitored with a 0 to 1000 psi gage. The scale should be incremented in 20 psi increments.

11. Record tubing and annulus pressure values every five (5) minutes.

12. At the end of the test, record the final tubing pressure.

13. If the test fails, check the valves, bull plugs and casing head close up for possible leaks. The well should be retested.

14. If the second test indicates a well failure, the Region should be informed of the failure within 24 hours by the operator, and the well should be shut-in within 48 hours per Headquarters guidance #76. A follow-up

letter should be prepared by the operator which outlines the cause of the MIT failure and proposes a potential course of action. This report should be submitted to EPA within five days.

15. Bleed off well into a bucket, if possible, to obtain a volume estimate. This should be compared to the calculated value obtained using the casing/tubing annulus volume and fluid compressibility values.

16. Return to office and prepare follow-up.

Attachment

Form Approved. OMB No. 2000-0042. Approval expires 9-30-86

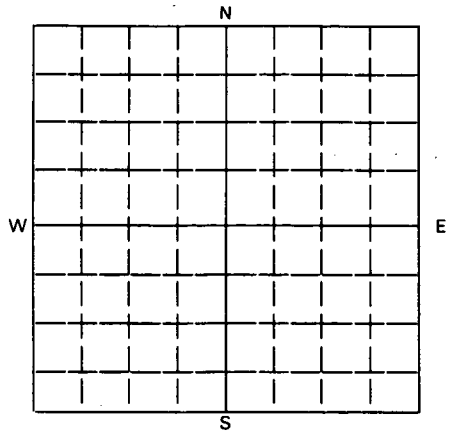
EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY		TYPE OF PERMIT
☐ Brine Disposal ☐ Enhanced Recovery ☐ Hydrocarbon Storage	Total Depth Before Rework	☐ Individual ☐ Area Number of Wells ____
	Total Depth After Rework	
Lease Name	Date Rework Commenced	Well Number
	Date Rework Completed	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

WELL CASING RECORD — AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).

NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED

Form Approved. OMB No. 2000-0042. Approval expires 9-30-86

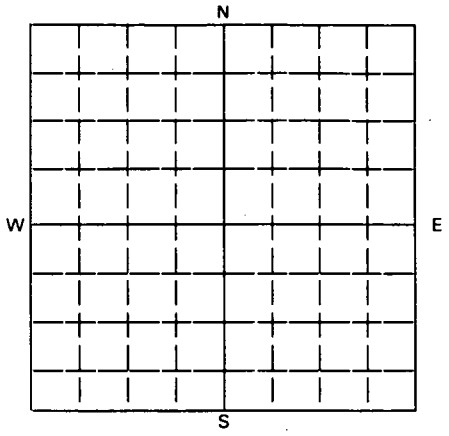
EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

WELL REWORK RECORD

NAME AND ADDRESS OF PERMITTEE	NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES



STATE	COUNTY	PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

¼ OF ¼ OF ¼ SECTION TOWNSHIP RANGE

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location ____ ft. from (N/S) ____ Line of quarter section

and ____ ft. from (E/W) ____ Line of quarter section

WELL ACTIVITY		TYPE OF PERMIT
☐ Brine Disposal ☐ Enhanced Recovery ☐ Hydrocarbon Storage	Total Depth Before Rework	☐ Individual ☐ Area Number of Wells ____
	Total Depth After Rework	
Lease Name	Date Rework Commenced	Well Number
	Date Rework Completed	

WELL CASING RECORD — BEFORE REWORK

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

WELL CASING RECORD — AFTER REWORK *(Indicate Additions and Changes Only)*

Casing		Cement		Perforations		Acid or Fracture
Size	Depth	Sacks	Type	From	To	Treatment Record

DESCRIBE REWORK OPERATIONS IN DETAIL USE ADDITIONAL SHEETS IF NECESSARY	WIRE LINE LOGS, LIST EACH TYPE	
	Log Types	Logged Intervals

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NAME AND OFFICIAL TITLE *(Please type or print)*	SIGNATURE	DATE SIGNED